



Northern Pacific Railway Company.  
Engineering Department Records.

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N. P. 1757 (C.E. File 9793.)  
6-24

OFFICE OF ASSISTANT CHIEF ENGINEER.

FILE NO. 922-1

SUBJECT:

Ice Treating Plant  
Seattle

Contract: West Coast Wood Preserv. Co.  
(See File 922-1-a for Contract data.)

From: Jan. 11, 1936

To: \_\_\_\_\_



922-1

9793

SUPPLEMENTAL AGREEMENT dated this 1st day of September, 1950, between NORTHERN PACIFIC RAILWAY COMPANY, hereinafter called Railway Company, and WEST COAST WOOD PRESERVING COMPANY, hereinafter called Creosoting Company.

HBK BB The parties hereto entered into an agreement dated April 15, 1946, for the storage and treatment by the Creosoting Company of timber products for the Railway Company which agreement was supplemented by agreements of April 15, 1946, July 26, 1946, January 1, 1947, June 24, 1947, February 3, 1948, and June 8, 1950, and the parties now desire to amend the price schedule stated in said contract as amended.

NOW, THEREFORE, in consideration of the premises and the mutual dependent promises of the parties, it is agreed that said contract of April 15, 1946, as heretofore amended by agreements above recited, shall be altered and amended by striking therefrom paragraph XVIII and substituting in lieu thereof the following:

XVIII

"The Railway Company agrees to pay the Creosoting Company, effective as of September 1, 1950, for the treatment of cross ties and switch ties the prices hereinafter stated, and to pay to the Creosoting Company, effective as of September 1, 1950, the prices hereinafter stated for all other timber products:

	Prices Per Present Contract	Additions This Amendment	Revised Prices This Amendment
A-1 Treatment of all seasoned cross ties per M'BM	\$10.26	.28	\$10.54
A-2 Treatment of unseasoned cross ties taken from incoming railroad cars per M'BM	10.26	.28	10.54
A-3 Treatment of unseasoned cross ties taken from stock piles in seasoning yard per M'BM	11.01	.28	11.29
B-1 Treatment of seasoned switch ties per M'BM (x)	15.91	.28	16.19
B-2 Treatment of unseasoned switch ties taken from incoming railroad cars per M'BM (x)	15.91	.28	16.19
B-3 Treatment of unseasoned switch ties taken from stock piles in seasoning yard per M'BM (x)	16.91	.28	17.19
B-4 Treatment bridge ties in cylinder capacity lots, conditions and prices of B-1, B-2, and B-3 shall apply, treatment bridge ties in less than cylinder capacity lots, conditions and prices of C-1, C-2, and C-3 shall apply.			
C-1 Treatment sawed material other than cross ties and switch ties in cylinder charges of 30,000'BM or less (option of treating separately of mixed with commercial material) Per M'BM	20.31	.28	20.59

Copy to G&D -

C-2	Treatment sawed materials other than cross ties and switch ties in cylinder charges in excess of 30,000'BM with time duration of 14 hours or less actual treating time per M'BM	\$18.06	.28	\$18.34
C-3	Time in excess of 14 treating hours required for treating material covered by Par. C-2 per M'BM per hour	0.17	---	0.17
D-1*	Price for the treatment of the Railroad Company's piles, poles or other round material in mixed or full charges, unlimited retort time and inclusive of retreatment when necessary, but exclusive of preservative, per cubic foot	0.297	.003	0.300
The cubical contents per lin. ft. of the material shall be determined in accordance with Table #1, MPR 491.				
E-1	Storage of treated cross ties after treatment and subsequent loading on cars in addition of prices A-1, A-2, A-3 per tie	0.02	---	0.02
E-2	Storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with Railway instructions for shipment, in addition to prices B-1, B-2, B-3 per M'BM	1.888	.047	1.935
(x)	Inclusive loading out switch ties on specified orders of sets.			
E-3	Incising sawed material other than cross ties and switch ties, including handling not included under C-1, C-2, C-3 per M'BM	2.16	.10	2.26
E-4	For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus 13.5 per cent to cover supervision and profit.			

\*The prices quoted in paragraph D-1 are predicated on the Railway Company's having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment, the Railway Company shall have the option of purchasing treated piles at mutually agreeable prices from the stock of the creosoting Company at its current commercial prices.

Note: Whenever the expression "B'BM" appears in this paragraph XVIII, it shall be construed to mean "One thousand feet board measure."



Upon the effective date of this Supplemental Agreement the Supplemental Agreements dated April 15, 1946, July 26, 1946, January 1, 1947, and June 24, 1947, February 3, 1948, and June 8, 1950, to said contract shall be and are hereby cancelled and terminated, and except as herein altered and amended, said contract of April 15, 1946, shall remain in full force and effect.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY

A. M. Gottschald  
Secretary (SEAL)

By W. W. Judson  
Vice President

WEST COAST WOOD PRESERVING COMPANY

R. F. Dreitzler  
Secretary (SEAL)

By L. C. Henry  
President

OFFICE OF  
ENGINEERS  
SEP  
27  
1950  
NOR. PAC. RY.  
ST. PAUL, MINN.



922-1

FEB 27 1948  
OFFICE OF  
ST. PAUL, MINN.  
NOR. PAC. RY. CO.

SUPPLEMENTAL AGREEMENT dated this 3rd day of Feb., 1948, between NORTHERN PACIFIC RAILWAY COMPANY, hereinafter called Railway Company, and WEST COAST WOOD PRESERVING COMPANY, LBdaP hereinafter called Creosoting Company.

The parties hereto entered into an agreement dated April 15, 1946, for the storage and treatment by the Creosoting Company of timber products for the Railway Company which agreement was supplemented by agreements of April 15, 1946, July 26, 1946, January 1, 1947, and June 24, 1947, and the parties now desire to amend the price schedule stated in said contract as amended.

NOW, THEREFORE, in consideration of the premises and the mutual dependent promises of the parties, it is agreed that said contract of April 15, 1946, as heretofore amended by agreements above recited, shall be altered and amended by striking therefrom paragraph XVIII and substituting in lieu thereof the following:

"XVIII

"The Railway Company agrees to pay to the Creosoting Company, effective as of Feb. 1, 1948, for the treatment of cross ties and switch ties the prices hereinafter stated, and to pay to the Creosoting Company, effective as of Feb. 15, 1948, the prices hereinafter stated for all other timber products:

	<u>Prices Per</u> <u>Present</u> <u>Contract</u>	<u>Addition</u> <u>This</u> <u>Amendment</u>	<u>Revised</u> <u>Prices This</u> <u>Amendment</u>
A-1 Treatment of all seasoned cross ties per M'BM	\$9.27	.41	\$9.68
A-2 Treatment of unseasoned cross ties taken from incoming railroad cars per M'BM	9.27	.41	9.68
A-3 Treatment of unseasoned cross ties taken from stock piles in seasoning yard per M'BM	10.02	.41	10.43
B-1 Treatment of seasoned switch ties per M'BM (x)	14.92	.41	15.33
B-2 Treatment of unseasoned switch ties taken from incoming railroad cars per M'BM (x)	14.92	.41	15.33
B-3 Treatment of unseasoned switch ties taken from stock piles in seasoning yard per M'BM (x)	15.92	.41	16.33

B-4 Treatment bridge ties in cylinder capacity lots, conditions and prices of B-1, B-2, and B-3 shall apply, Treatment bridge ties in less than cylinder capacity lots, conditions and prices of C-1, C-2, and C-3 shall apply.			
C-1 Treatment sawed material other than cross ties and switch ties in cylinder charges of 30,000'BM or less (option of treating separately or mixed with commercial material) per M'BM	19.32	.41	19.73
C-2 Treatment sawed material other than cross ties and switch ties in cylinder charges in excess of 30,000'BM with time duration of 14 hours or less actual treating time per M'BM.	17.07	.41	17.48
C-3 Time in excess of 14 treating hours required for treating material covered by Par.C-2 per M'BM per hour	0.17	---	0.17
D-1*Price for the treatment of the Railroad Company's piles, poles or other round material in mixed or full charges, unlimited retort time and inclusive of retreatment when necessary, but exclusive of preservative, per cubic foot	0.285	.005	0.29
The cubical contents per lin. ft. of the material shall be determined in accordance with Table #1, MPR 491.			
E-1 Storage of treated cross ties after treatment and subsequent loading on cars in addition to prices A-1, A-2, A-3 per tie	0.02	---	0.02
E-2 Storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with Railway instructions for shipment, in addition to prices B-1, B-2, B-3, per M'BM	1.72	.07	1.79
(x) Inclusive loading out switch ties on specified orders or sets			
E-3 Incising sawed material other than cross ties and switch ties, including handling not included under C-1, C-2, C-3 per M'BM	1.80	.15	1.95

E-4 For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus ten (10) per cent to cover supervision and profit.

\* The prices quoted in paragraph D-1 are predicated on the Railway Company's having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment, the Railway Company shall have the option of purchasing treated piles at mutually agreeable prices from the stock of the Creosoting Company at its current commercial prices.

Note - Whenever the expression "M'BM" appears in this paragraph XVIII, it shall be construed to mean "one thousand feet board measure."

Upon the effective date of this Supplemental Agreement the Supplemental Agreements dated April 15, 1946, July 26, 1946, January 1, 1947, and June 24, 1947, to said Contract shall be and are hereby cancelled and terminated, and except as herein altered and amended, said Contract of April 15, 1946 shall be and remain in full force and effect.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY

A. M. Gottschald  
Secretary (SEAL)

By W. W. Judson  
Vice President

WEST COAST WOOD PRESERVING COMPANY

R. F. Dreitzler  
Secretary (SEAL)

By L. C. Henry  
President



Seattle, Washington  
February 3, 1948

RECOMMENDATION

The undersigned committees agree to recommend to the individual local unions and individual employers they respectively represent the following as a settlement of the current negotiations:

Effective as of January 1, 1948, a wage increase of seven and one-half cents per hour will be paid to all employees on the payroll on the date that this recommendation is accepted by the individual employer and local union.

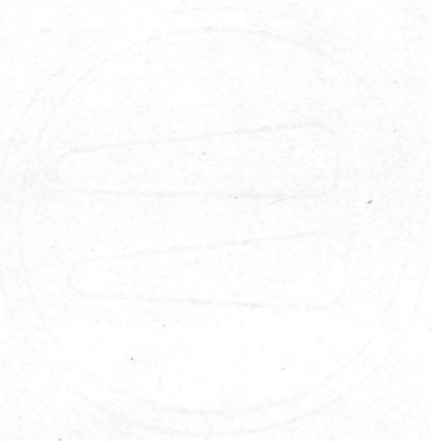
LUMBER AND SAWMILL WORKERS UNION, WEST COAST WOOD PRESERVING CO.  
A. F. of L.

/s/ Earl Hartley by E.C.Jorgensen  
Chairman, Union Negotiating  
Committee

/s/ R. F. Dreitzler  
Manager



OF  
CHIEF  
FEB  
27  
1948  
RY



*Tip Meit*

Washington, D. C.  
March 19, 1944

AIR MAIL

Mr. Bernard Blum: ✓

Referring to your letter of March 11 about revision of the price schedule in the contract with the WEST COAST WOOD PRESERVING CO. for treatment of ties and timber at Seattle:

Since this will be a new contract with important revisions in the price schedule, and the necessity for making adequate provisions fair to both parties with respect to future adjustments either upward or downward, I would naturally like to have the opportunity to make a complete and deliberate review of all of the circumstances before making a definite recommendation. It is, of course, entirely possible that the draft which the contractors have suggested is complete, fair, and equitable, but I still consider the matter of sufficient importance to be handled without haste.

By reason of the fact of our having had the most pleasant relations in our business transactions with this company in the past, and the existence of a mutual confidence, together with the further fact that there need be no financial loss to either party by reason of the unavoidable delay in consummating the new contract, I am not so greatly disturbed by the necessity for still further prolonging the completion for a relatively short period.

While it would be possible for me, even under the restricted circumstances, to work out an understanding at this distance from the office, I am strongly of the belief that the matters that kept me in Washington for an uncertain period would be cleared up before I could possibly work out an acceptable arrangement through long distance correspondence, and that would result in considerable wasted effort.

It seems to me that in order to avoid complications to us in attempting to accept bills on a new price schedule which we could not have audited prior to the approval of the new contract, we should make advances to the contractor in amounts equivalent to the charges based on the schedule which the contractor has suggested to Mr. Loom. I do not believe that we would be taking any chances whatever in following out that suggestion.

LY/jwm  
Dictated, not read.

L. YAGER

cc Mr. A. J. Loom - AIR MAIL

ST. PAUL, MINN.  
MAR 13 1944  
NO. 1344  
OFFICE OF THE  
ASSISTANT  
ATTORNEY GENERAL

Saint Paul, March 11, 1944

MR. L. YAGER:

Referring to Mr. Loom's letter of the 1st to you quoting wire from Mr. Stone regarding provision in the contract with the West Coast Wood Preserving Co. for treatment of ties and timbers at Seattle:

I wonder if you cannot progress this matter by correspondence. Apparently these people are becoming impatient and it rather looks as though you may be tied up for some time in Washington.

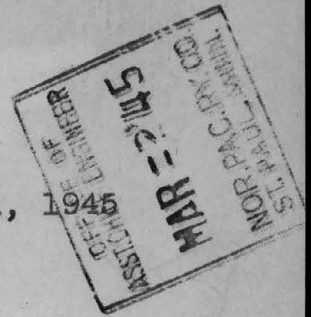
bb/s

HP 3/19

Bernard Blum



922.1  
Brainerd, Minn. March 1, 1945



Mr. L. Yager:

Referring to the attached letter of Feb. 26th from the West Coast Wood Preserving Company.

We have discussed with Mr. Blum and Mr. Willis the possibility of getting the producers to return to the normal practice of loading only four sizes of switch ties on a car when shipping, not only to Seattle but to our other plants as well. Mr. Willis has instructed Mr. Myers but so far there has been no improvement.

We are continuing to note on vouchers in payments to the West Coast Wood Preserving Company, the following: "Payment subject to approval of the Northern Pacific Railway Company as suggested in Mr. Yager's letter of March 19th, 1944." All vouchers have been approved and no question has been raised by our General Offices but in view of the many months that have elapsed I think possibly it would be most appropriate for you to reply to the last sentence in this letter at your earliest convenience.

AJL/bmr

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

PLANTS AT  
EAGLE HARBOR, WASH.  
SEATTLE, WASH.

1118 4TH AVE. AT SENECA ST.

CABLE ADDRESS  
"CREOSOTE"

R. F. DREITZLER  
MANAGER

SEATTLE 1, WASHINGTON

February 26, 1945

Mr. A. J. Loom,  
General Supt. Timber Preservation  
Northern Pacific Railway  
Brainerd, Minnesota

AIR MAIL

Dear Mr. Loom:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.

TERMS: NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.

INSPECTION: ALL MATERIAL TO BE SUBJECT TO INSPECTION AT OUR PLANTS BY PURCHASER OR PURCHASER'S REPRESENTATIVE IF DESIRED; IN ANY CASE OUR RESPONSIBILITY CEASES UPON DELIVERY TO CARRIER AT OUR PLANT.

This past week we handled switch ties for your account at our West Seattle plant. After using all of our available manpower and the Colby crane for three days unloading cars, sorting and placing alongside the conveyor we had handled only about 60,000' BM at a labor cost of approximately \$2.50 per M' BM. The purpose of this letter is to bring to your attention the way the cars were loaded and the wide distribution of lengths on each car in hopes that this practice can be corrected which will materially increase the output of switch ties to our mutual advantage.

I understand prior to the war that your switch ties were shipped to our plant, loaded on open cars, horizontally stuck and each car containing the maximum of four lengths per car. At present, the cars are loaded interlaced with no separations in some cases and in all cases the cars contained switch ties ranging from 8'6" to 16'0" or in some instances loaded with sixteen different lengths, all of which have to be segregated into individual lifts by lengths before setting to the conveyor at a low production rate and at an excessive use of manpower and crane time.

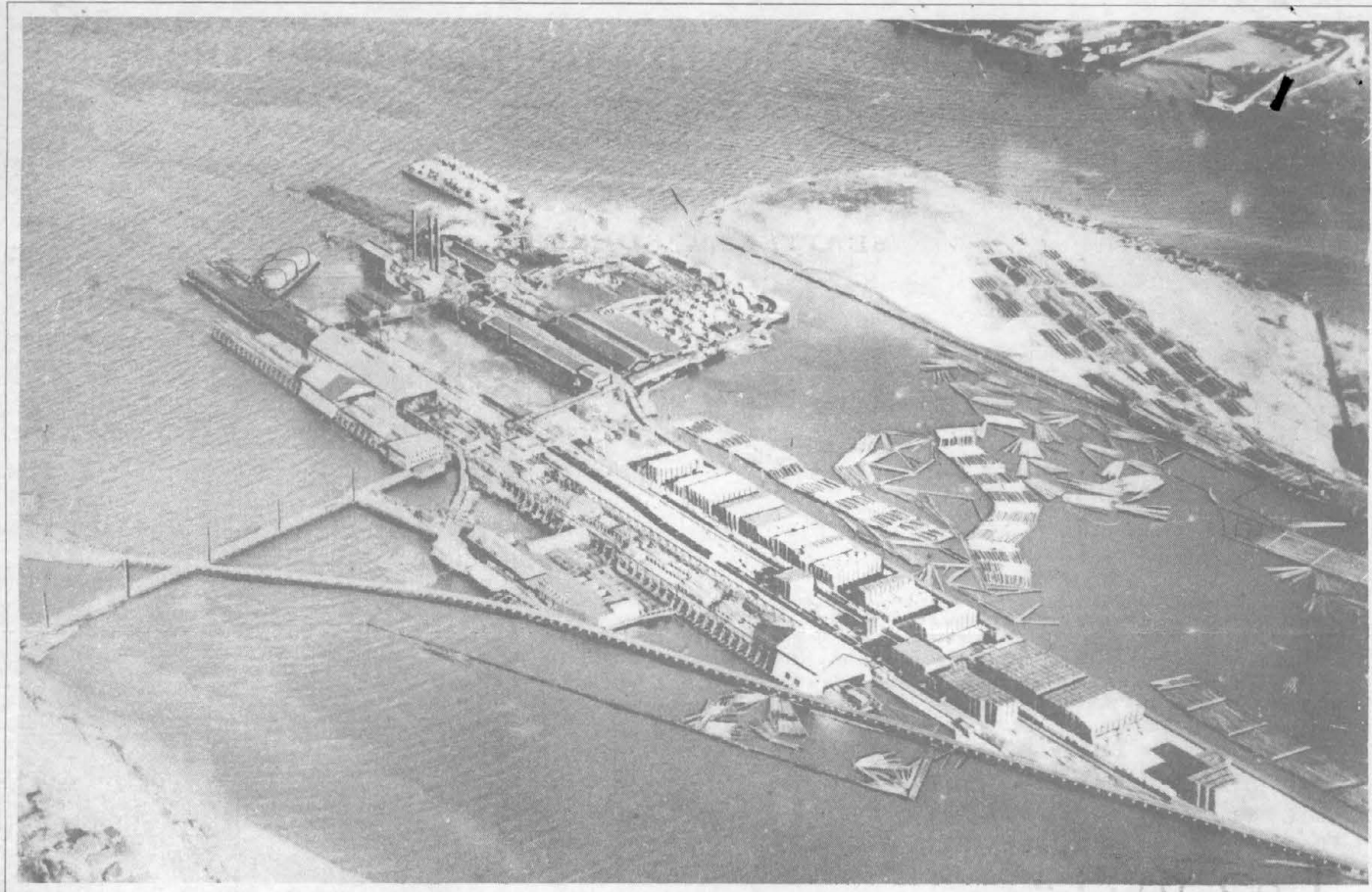
We assure you if you could persuade your purchasing department to revert to your former practice of loading switch ties, i.e. horizontally stuck and each car limited to not more than four tie lengths per car, that a saving in labor amounting to at least 50% would result. This saving, of course, would increase production and it would be of material assistance to speed treatment of your much needed materials now limited by a critical shortage of manpower. We would appreciate receiving your comments.

Can you advise when our treating contract will be signed by your companies' representatives?

Very truly yours,  
WEST COAST WOOD PRESERVING CO.  
By *R. F. Dritzler*  
Manager

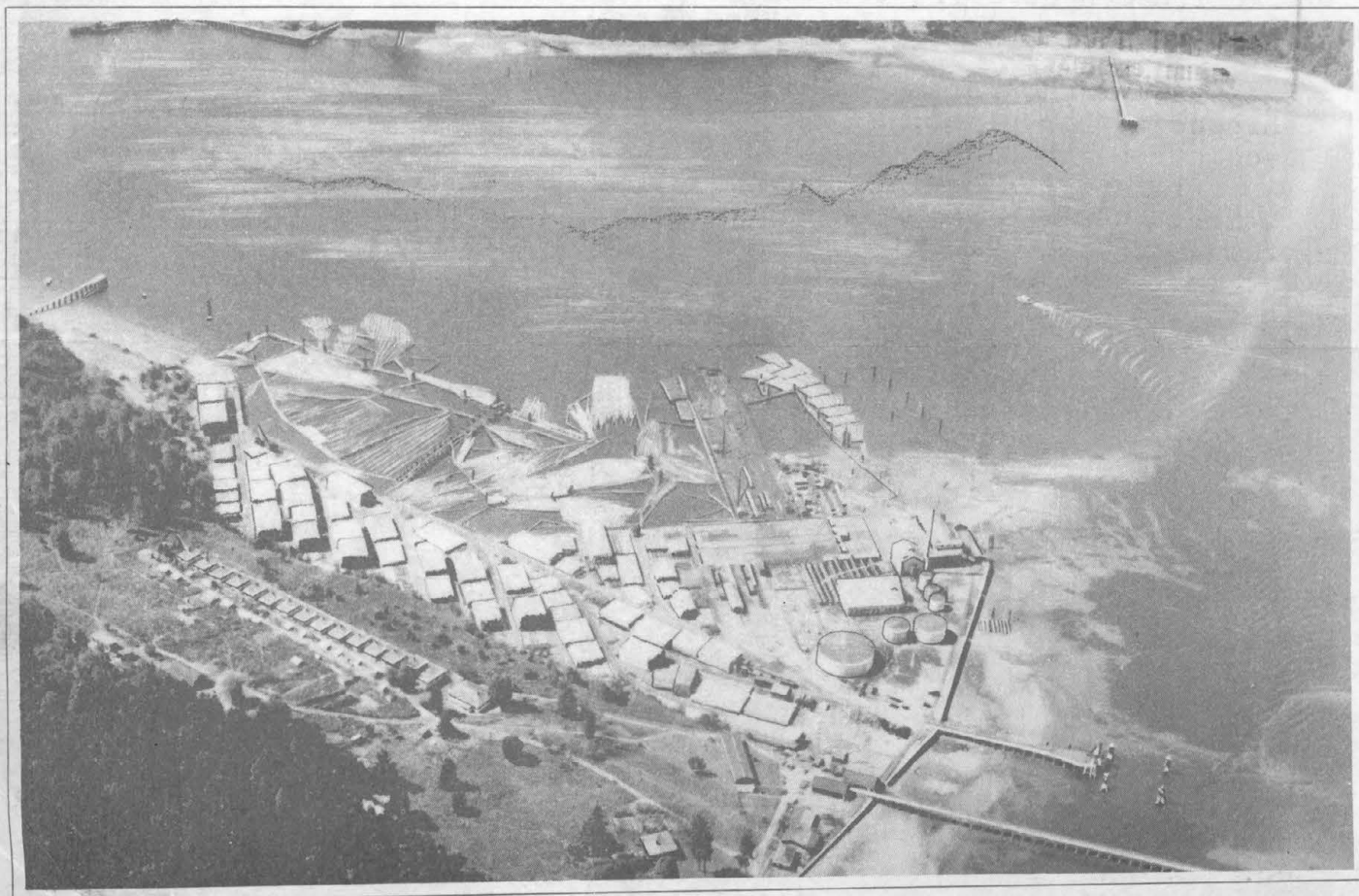
RFD/O  
cc. Mr. Stone  
cc. Mr. Hamm





AERIAL VIEW OF MANUFACTURING PLANTS

MAR 1 1945



9-22-1

NOT PAC. RY. CO.  
ST. PAUL, MINN.  
MAR - 31 1944  
ASST. CHIEF  
CLERK

Brainerd, Minnesota, March 1, 1944.

Mr. L. Yager:

Referring to my letter of February 25th  
quoting wire from the West Coast Wood Preserving Company  
about proposed revision of contract prices:

I now have the following wire from Mr. Stone,  
dated February 28th:

"Re wire from WCWP Co. Feb. 24. They are  
holding up invoices for February treatment pending  
approval of new contract. They have received no  
reply to the Wire. S-15."

This for your information. Will you kindly  
handle as you think the circumstances may warrant?

AJL:lp

cc: Mr. Bernard Blum

*Stone*

*2.9.6/10*

Washington, D. C.  
February 29, 1944

VIA AIR MAIL

Mr. A. J. Loom:

Referring to your letter of February 25 concerning billing for February business in connection with the revision of the contract with the West Coast Wood Preserving Co. at Seattle:

Inasmuch as we can not have bills properly audited until after the formal approval of the new contract or a revised price schedule, it is apparent that we will have to follow one of two methods: first, making the bills on the basis of the existing practice subject to such revision and retroactive pricing as may appear in the finally approved contract; or, second, follow the practice suggested by Mr. Dreitzler to make the bills on the basis of his views as to what the price should be and then hold these bills in abeyance until after formal approval of the new price schedule is received.

While I still believe the former method is the best, yet if Mr. Dreitzler insists on his views I see no particular reason for voicing an objection. In view of the slow progress being made here it may still be some considerable time before I will get an opportunity to go to Seattle with you. I believe you should fully appraise Mr. Dreitzler of this situation so that he will not get the opportunity to get the impression that we are stalling.

LY/jwm

L. YAGER.

cc Mr. Bernard Blum



Brainerd, Minn., February 25, 1944.

RECEIVED  
FEB 26 1944  
ST. PAUL, MINN.

Mr. L. Yager:

In response to my letter of February 18th to Mr. Dreitzler, of which I sent you copy, the West Coast Wood Preserving Company wired me on February 24th as follows:

"Regarding letter 18th. To save duplication invoicing suggest we price February business basis new contract even though payment may be deferred pending approval. Advise."

If, as suggested, they are willing to wait for payment of the February bills until final approval of the revised contract with the understanding that the amount due them will be subject to correction to conform with the new rates approved, then it seems to me there should be no objection to their suggestion. This would save a lot of clerical work in this office as well as for the contractor.

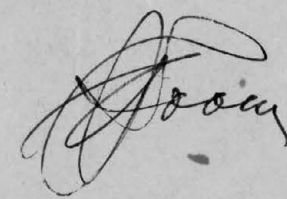
We estimate that the W.C.W.P.Co. bills for February would, at the old rates, amount to about \$6425.00 and at the new rates proposed about \$7245.00, or a difference of only \$820.00 that would be subject to correction.

In view of our satisfactory business relationship with the West Coast Wood Preserving Company during the past 17 years, I would not hesitate to comply with their suggestion in this matter.

Will you kindly advise what I should reply or if you will let them know directly from your office?

AJL:lp

cc: Mr. Bernard Blum.



9-27-1  
FEB 19 1944  
OFFICE OF  
THE  
MANAGER  
Brainerd, Minn., February 18, 1944.

Mr. R. F. Dreitzler  
Assistant Manager  
West Coast Wood Preserving Co.  
1118 Fourth Ave. at Seneca St.  
Seattle, Washington

Dear Mr. Dreitzler:

In reply to your letter of February 10th concerning proposed revision and renewal of contract covering treatment of Northern Pacific Railway Company material at your Seattle plant:

As mentioned in our discussion in your office last week, Mr. Yager has been so busy with other matters that he was unable to go to Seattle as he had planned and he now finds it necessary to make another trip to Washington, D. C. next week so it seems doubtful if he will have an opportunity to go over the revision with us and obtain approval in time to avoid delay in payment if new rates are used in making up your February bills.

If you are depending on usual prompt payment I think it would be best for you to present invoices for February at the old rates and bill us for balance due you under the new rates as soon as new rates are formally approved.

I will wire you if it seems possible to obtain final action before the end of this month as we planned, but in view of the circumstances mentioned we regret to say that it may not be possible before the middle of March.

With best wishes,

Yours truly,

  
A. J. Loom

Gen'l Supt. Timber Preservation.

AJL:lp

cc: Mr. L. Yager  
Mr. G. H. Stone



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

125 MDK

PARADISE 8 44 L YAGER

ST P

Y- 99 ARRANGING TO MEET HERROCKS AT HIS OFFICE THURSDAY AND  
WILL EXPLAIN L 3

A J LOOM 3 PM

*W.F. 2/9*

OFFICE OF  
ASSISTANT ENGINEER  
FEB-8 44  
NOR. PAC. RY. CO.  
ST. PAUL, MINN.



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

St Paul, Feb 8 1944

A J Loom

- Paradise

922-1

Trip tp Coast postponed account immediate emergency trip to Washington. You may advise Horrocks that we will arrive Seattle as soon as I have been able to clean up emergency matters in the East. Y-99

L YAGER

8:45 AM



*Trip Note*

St. Paul, Jan. 7, 1944

Mr. Bernard Blum:

I have looked over the file you left with me a few days ago on Mr. Horrocks' request for increasing prices in contract with the West Coast Wood Preserving Co.

It occurs to me that there are so many smaller issues unsettled, and the fact that Mr. Horrocks desires to have the revised agreement consistent with current OPA regulations, that it would take an interminable time to adjust all these matters by correspondence so that I believe Mr. Loom and I should make a trip to Seattle and endeavor to straighten out all of these details to the end that a mutually satisfactory revised schedule be prepared at an early date.

I would like to plan on making this trip soon after you return to St. Paul.

L. YAGER.

LY/jwm

St. Paul, Jan. 7, 1944

Mr. Bernard Blum:

I have looked over the file you left with me a few days ago on Mr. Horrocks' request for increasing prices in contract with the West Coast Wood Preserving Co.

It occurs to me that there are so many smaller issues unsettled, and the fact that Mr. Horrocks desires to have the revised agreement consistent with current OPA regulations, that it would take an interminable time to adjust all these matters by correspondence so that I believe Mr. Loom and I should make a trip to Seattle and endeavor to straighten out all of these details to the end that a mutually satisfactory revised schedule be prepared at an early date.

I would like to plan on making this trip soon after you return to St. Paul.

LY/jwm

L. YAGER.

N. P. 1567  
5-24

REPORT OF DEMURRAGE CHARGES ASSESSED AT

*Quincy*

STATION FOR THE MONTH OF

*July*

REPORTING  
19

1 CAR		2	3	4	5	6	7	8	9	10	11	12	13	
INITIAL	NUMBER	CONTENTS	CONSIGNOR OR CONSIGNEE	STATE OR INTERSTATE	DATE RECEIVED	DATE NOTIFIED	DATE INSPECTED	DATE ORDERED	CONSTRUCTIVE PLACEMENT	ACTUAL PLACEMENT	DATE RELEASED	PRO. NO.	CHARGES	
<i>NP</i>	<i>58699</i>	<i>2ees</i>	<i>NP Ry &amp; W.C. Wood</i>		<i>6/13</i>					<i>6/14</i>	<i>7 1/2</i>		<i>114 40</i>	<i>✓</i>
<i>mil</i>	<i>60564</i>				<i>6/15</i>					<i>4/6</i>	<i>7 2</i>		<i>2590</i>	
<i>PCE</i>	<i>45885</i>				<i>6/18</i>					<i>4/9</i>	<i>7 2</i>		<i>5390</i>	
<i>NP</i>	<i>62497</i>				<i>7/4</i>					<i>7/6</i>	<i>7 8</i>		<i>270</i>	
	<i>71633</i>				<i>7/25</i>			<i>230</i>	<i>Shunted to yard</i>				<i>15 40</i>	
													<i>261 80</i>	

*Ag. L.*  
*For your information -*  
*8/29/43*

*L. Y.* *For your disposition*  
*9/17/43*

*E. E. Gray*

AGENT



924

N. P. Ry. Co.  
OFFICE OF  
AUG 26 1943  
GEN'L SUPT. TER. PRES.  
INDIANAPOLIS, INDIANA



JK-

922-1

For your information.

Mr. Gage -

For your disposition

JKS 3/26/42.

Doc 3/30-42

N. P. 1567  
5-24

## REPORT OF DEMURRAGE CHARGES ASSESSED AT

Seattle Wash

STATION FOR THE MONTH OF

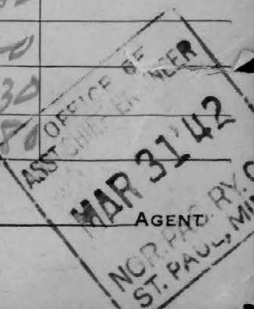
Feb

REPORTING NO.

19

1		2	3	4	5	6	7	8	9	10	11	12	13	14
CAR		CONTENTS	CONSIGNOR OR CONSIGNEE	STATE OR INTERSTATE	DATE RECEIVED	DATE NOTIFIED	DATE INSPECTED	DATE ORDERED	CONSTRUCTIVE PLACEMENT	ACTUAL PLACEMENT	DATE RELEASED	PRO. NO.	CHARGES	
INITIAL	NUMBER													
	86842	Co Inc	NP Ry Co		2 2					2 3	2 5		2 70	
	86703	✓	Went Cotwood		2 2					2 3	2 5		2 70	
	86839	✓	Bus		2 2					2 3	2 19		53 80	
	86864	✓			2 2					2 3	2 19		53 80	
	85714	✓			1 14					1 15	2 18		135 30	
	85583	✓			1 14					1 15	2 13		113 30	
	54597	✓			1 9					1 10	2 13		135 30	
	86873	✓			1 26					1 27	2 11		52 80	
	86572	✓			1 26					1 27	2 5		25 30	
	86346	✓			1 26					1 27	2 18		80 30	
	86222	✓			1 26					1 27	2 11		52 80	
	85818	✓			1 26					1 27	2 11		52 80	
	86067	✓			1 26					1 27	2 2	29	8 80	
	86442	✓			1 24					1 26	2 18		85 80	
	53701	✓			2 3					2 4	2 20		52 80	
	86904	✓			1 30					2 2	2 18		52 80	
	86083	✓			2 4					2 5	2 20		47 30	
	86526	✓			2 4					2 5	2 11		8 80	
	86201	✓			2 8					2 6	2 20		41 80	
	86901	✓			2 5					2 6	2 20		41 80	
	85599	✓			2 6					2 7	2 11	29	4 40	
	86470	✓			2 6					2 7	2 20		36 80	
	86697	✓			2 4					2 5	2 11	29	8 80	
	86725	✓			2 7					2 9	2 11		2 20	
	86619	✓			2 9					2 10	2 20		25 30	
													1,176 80	

J J Collins



N. P. RY. CO.  
OFFICE OF  
MAR 30 1942  
MAIL ART. TBR. 1942



N. P. 1567  
5-24

REPORT OF DEMURRAGE CHARGES ASSESSED AT

Station

STATION FOR THE MONTH OF

July

REPORTING NO.

19

Sheet 2

1 CAR		2	3	4	5	6	7	8	9	10	11	12	13
INITIAL	NUMBER	CONTENTS	CONSIGNOR OR CONSIGNEE	STATE OR INTERSTATE	DATE RECEIVED	DATE NOTIFIED	DATE INSPECTED	DATE ORDERED	CONSTRUCTIVE PLACEMENT	ACTUAL PLACEMENT	DATE RELEASED	PRO. NO.	CHARGES
			NPAY Co										1176 80
	55037	✓	W. West Coast		2 11					2 13	2 20	24	14 30
	86814	✓	Wood Bros		2 12					2 13	2 24		25 30
	58616	✓	—		2 12					2 13	2 20		14 30
	86460	✓	—		2 12					2 13	2 24		25 30
	86347	✓	—		2 13					2 14	2 24		19 80
	86364	✓	—		2 13					2 14	2 24		19 80
	85720	✓	—		2 15					2 16	2 24		14 30
	84797	✓	—		2 16					2 17	2 19		2 20
	53731	✓	—		2 14					2 17	2 24		8 80
	86437	✓	—		2 16					2 17	2 24		8 80
	59061	✓	—		2 16					2 17	2 19		2 20
	85571	✓	—		2 16					2 17	2 25		14 30
	58631	✓	—		2 16					2 17	2 24		8 80
	85509	✓	—		2 16					2 17	2 19		2 20
	85911	✓	—		2 16					2 17	2 19		2 20
	86038	✓	—		2 19					2 20	2 27		8 80
	52435	✓	—		2 19					2 20	2 25		4 40
	86515	✓	—		2 19					2 20	2 24		2 20
	55609	✓	—		2 19					2 20	2 27		8 80
	58716	✓	—		2 20					2 21	2 27		6 60
	58000	✓	—		2 20					2 21	2 27		6 60
	84189	✓	—		2 21					2 24	2 27		4 40
	86523	✓	—		2 24					2 25	2 27		2 20
													1403 40

J J Collins

AGENT

N. P. RY. CO. REPORT OF PLANNING AND TECHNICAL SERVICES

STATION FOR PLANNING

PLANNING

N. P. RY. Co.  
OFFICE OF  
MAR 30 1942  
GENL. SGT. TBR. PRES.  
BRAINERD, MISS.

OFFICE OF  
ASST. CHIEF - EN. DEPT.  
MAR 31 1942  
N. P. RY. CO.

For corresp. in 1939 about Sales Taxes  
paid West Coast Wood Preserv. Co. see Chif Engr  
file 9793.



922  
1

St. Paul, Minnesota

November 5, 1937.

Mr. Bernard Blum:

Referring to the attached containing  
voucher covering October bills from the West  
Coast Wood Preserving Company submitted with Mr.  
Loom's letter of November 4th:

In view of the latest ruling of our  
Western Counsel that this tax is not properly  
assessable we should revise the voucher to ex-  
clude the 2 per cent sales tax.

encl.

L. YAGER

# **PRESERVATIVE TREATMENT OF TIMBER PILING**

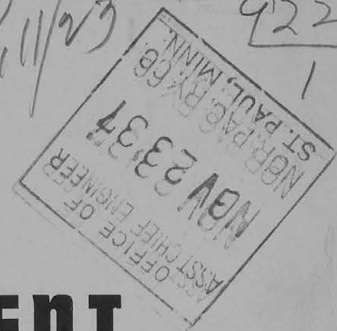
In the erection of important structures there is no proper place for experimentation with processes or materials which do not have a long and satisfactory record of service.

## **WEST COAST WOOD PRESERVING CO.**

OPERATING TWO PLANTS ESTABLISHED IN 1906, WHICH  
ARE NOW THE LARGEST WEST OF THE MISSISSIPPI.

*Office:* 1118 FOURTH AVENUE, SEATTLE

*Plants:* WEST SEATTLE and EAGLE HARBOR





## TIMBER—

### *The Ideal Structural Material*

TIMBER, since earliest history, has been the most readily available, easily worked and adaptable structural material. Its lightness, strength, low cost, inherent natural durability when properly used, and unlimited supply, are recognized as outstanding qualities.

### *Natural Enemies*

Parallel with the growth of trees, Nature provided various scavenging agencies to dispose of dead and down timber. The most active and efficient of these from standpoint of disposal are:

(a) On land and in fresh water, various types of fungi which feed by attacking and disintegrating wood fiber. The result is known as "decay."

(b) On land, also, termites ("white ants"), which excavate timber to provide a home and at the same time use the fiber as food.

(c) In sea water, many types of low order worms and bugs, generally known as teredos and limnoria, respectively.

These scavenging agencies do not distinguish between timber serving a useful purpose and that which is a nuisance.

### *Developments in Wood Preservation*

Man's effort to protect his structures from destruction was the genesis of the art of Wood Preservation. Many early expedients such as charring the wood, painting or smearing with bitumen, etc., served well enough for a short time. As timber became more valuable and structures built of it more costly and important, search for means of protecting wood from its natural destroying agencies became very active. It followed naturally that chemistry was the basic science to become involved in that search.

In due time it was discovered that certain inorganic salts, soluble in water, when applied to timber were poisonous to fungi and

other wood destroying agencies. Preservatives such as Zinc Chloride, Copper Sulphate, Bichloride of Mercury, Sodium Fluoride, Zinc Sulphate, Arsenic, and others, have been proposed for wood preservation, but all except Zinc Chloride have failed to be accredited because of the hazard in handling, corrosiveness or leachability and none are recommended for permanency when installed in or in contact with running water.

Coal Tar Creosote, formerly known as "Dead Oil of Coal Tar," was early found to be extremely poisonous to fungi, termites and marine borers. The oily and insoluble nature of this preservative, together with its uni-

formly high toxicity and permanence give it unique qualities which have stood the test of time. The earliest record of the treatment of timber with Coal Tar Creosote, injected under pressure, was in England in 1838 and in the United States in 1865. Consumption of Coal Tar Creosote for timber preservation in the United States in 1936 was 154,000,000 gallons and in 1919, for comparison, 67,900,000 gallons were used. It is of interest to note that 18,970,000 linear feet of piling was treated with Coal Tar Creosote using the pressure process in the United States during 1936. The increasing use of Coal Tar Creosote in practically all types of permanent construction attests the reliability and efficiency of this preservative.

Mechanics in the development of treating equipment has played a major part in the art of wood preservation. Treating plants

were devised, consisting of steel cylinders fitted with swinging doors which can be hermetically sealed against internal pressure. This equipment permits the filling of the cylinder, completely covering the charge with the treating solution and the application of pressure of sufficient intensity to force the preservative into the timber deeply and uniformly from all surfaces.

This pressure process requires substantial outlay of capital in plant construction. However, the success of this method of treatment has more than justified the expense involved. The pressure process, using an accredited preservative, is now universally specified for the treatment of timber where positive immunity from wood destroying agencies is desired. There are in the United States 152 pressure timber treating plants operating 359 retorts.

## *New and Revived Methods*

With the increased demand for treated timber, many new or unproven preservatives and methods of treatment have been exploited during the last few years. While some are new, others are merely an adaptation of some old method discarded years ago. The test of time under actual service conditions is the only proper method of evaluating preservatives and processes.

A typical example of a revived method of treatment is the Boucherie Process. This process was developed in France about 1840 for use in treating round poles with water borne toxic inorganic salts. Only fresh cut poles or piles can be treated by this system. Poles treated by the Boucherie Process had been limited to conditions of exposure not in contact with fresh or marine waters. The treating operation consisted essentially of the following steps:

(1) The poles or piles with the bark intact

were placed horizontally on skids. The butts were then capped with a sealed fitting.

(2) The caps were connected by hose to an elevated tank containing the water borne preservative or to a low pressure pump. The static head of the elevated tank, or the pump at low pressure, slowly forced the preservative through the timber from the large end to the small end or to a predetermined point.

(3) The poles after treatment were peeled, trimmed and properly air seasoned before being used. As the treatment only penetrated the sapwood, carefully controlled air seasoning was necessary in order to avoid excessive checking through the penetrated zone. Such checking would expose the untreated interior to wood destroying organisms.

A treating process recently introduced in Pacific Coast states is in principle and mechanical application similar to the Boucherie Process.

## *Comparison of Boucherie to Accredited Processing Methods*

The theory of treatment by the Boucherie Process is that toxic inorganic salts in water solution can, under moderate pressure, be slowly forced from the butt end of a pile or pole through the cells of the sapwood the entire length of the stick, and that in so doing the native sap is driven ahead and out of the top end, resulting in toxic solution displacing the native sap in the wood cells. Since the top end must remain open no greater volume of toxic solution can be left in the timber than that of the sap displaced. It is probable that only sap contained in the wood cells has been removed and that the volume of sap required to saturate the wood fiber has not been disturbed.

Piles and poles treated by this process have a moisture content equal to or greater than that present in the growing tree. Such timbers, if installed where drying conditions prevail, can be expected to check fully as radically as fresh cut, untreated stock, thus exposing untreated wood to destroying agencies.

Great care must be exercised with this treatment that the outer surface of the timber to be treated is not cut or severely bruised. It must also be relatively free from knots, burly grain or other similar characteristics. Such defects will cause the preservative solution to by-pass, with the result that a section of wood for some distance beyond such defects will not be adequately penetrated. Piles and poles by preference, because of these hazards, are treated by the Boucherie Process with bark intact. Likewise, since the treating solution must flow from cell to cell with the grain, knots which lie angled across the grain will remain untreated. It is common knowledge that marine borers will enter through untreated knots when a more desirable opportunity does not exist. The uncer-

tainty of securing a deep and uniform penetration of the sapwood throughout the entire length, because influenced by natural physical defects such as scars, burls, knots, etc., will undoubtedly be reflected in the ultimate life of the pile in marine borer infested waters. However, the bark itself, as long as it remains intact and adhering to the pile will be to some extent repellant to marine borers.

Piles and poles which are to be impregnated with Coal Tar Creosote are either pre air-seasoned to a low moisture content or are seasoned during the treating process by boiling in creosote at low temperature under vacuum. This results in the wood cells and fiber being reduced to a low moisture content; and in the timber being warmed and expanded ready to receive the creosote when forced into the timber under moderate pressure. By this method creosote permeates cells and cell walls of the sapwood alike and penetrates sound knots freely. The absorption of creosote can be controlled to satisfy the volume required by the purchase specifications. Inspection consists simply of boring the treated timber to make visual determination of depth and density of penetration.

There is a wide variety of inorganic salts or of combinations of such which are toxic to fungi, termites and marine borers. Only such salts as are water soluble can be made available for wood preservation since they must be forced into the wood under hydraulic pressure. It is considered good practice that timber treated with toxic salts in solution be dried after treatment and used only where not exposed to still or running water. If exposed to water, progressive dilution and carrying away of the preservative salts can be anticipated. Piling located in running streams or in sea water subject to ebb and



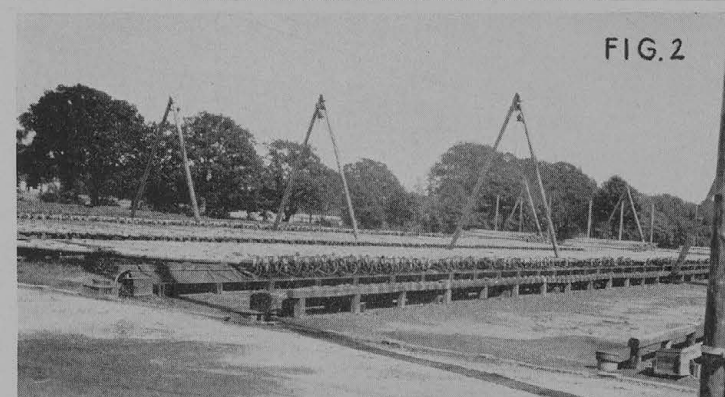
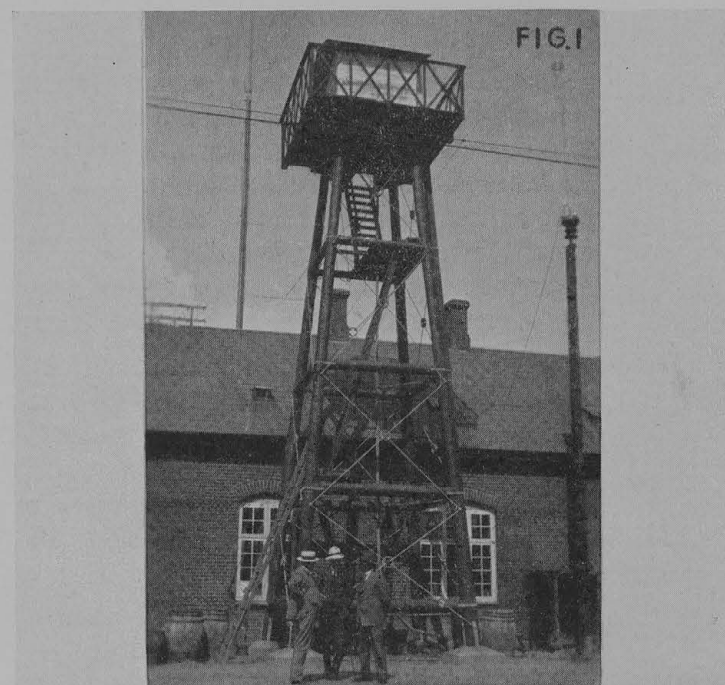
flow of tides would be especially vulnerable.

In preservative processes where impregnation is accomplished under pressure in closed cylinders, the volume of preservative left in

the wood is under definite control and can be varied to suit conditions under which the treated wood is to be used. With the Boucherie Process, on the other hand, only as much treating solution as is required to displace natural sap in the wood cells can be left in the timber.

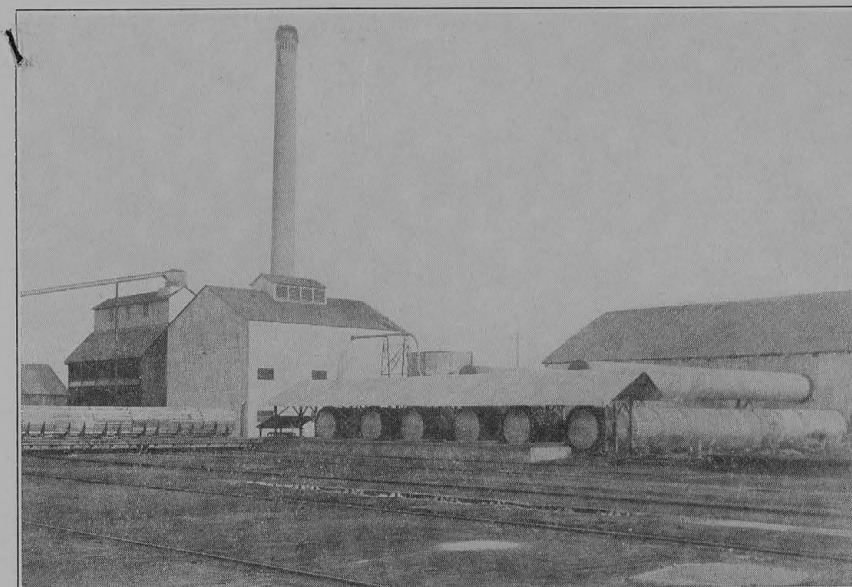
The Boucherie Process for treating timber with water soluble salts antedated the first recorded use of Coal Tar Creosote in pressure processing by about two years. The 1936 consumption of Coal Tar Creosote and production of piling treated with Coal Tar Creosote by pressure process—cited above—compared to the small amount of material treated to date by the Boucherie Process, is convincing evidence of the relative merits of the two processes.

Coal Tar Creosote for use as a



## Boucherie Treating Plant

Figures 1, 2 and 3 show the government Boucherie treating plant at Soro, Denmark. The preservative solution is conducted from the tank in the high tower through the small header pipe shown parallel to the ground in Fig. 2 and distributed through rubber hose pipes to the chambers at the butt ends of the poles formed by the wooden blocks and packing as shown in Fig. 3. The pressure caused by the height of the solution tank forces the preservative through the poles lengthwise, and treatment of the entire sapwood is complete in 10 to 12 days. (Courtesy 1927 Proceedings, American Wood-Preservers' Association.)



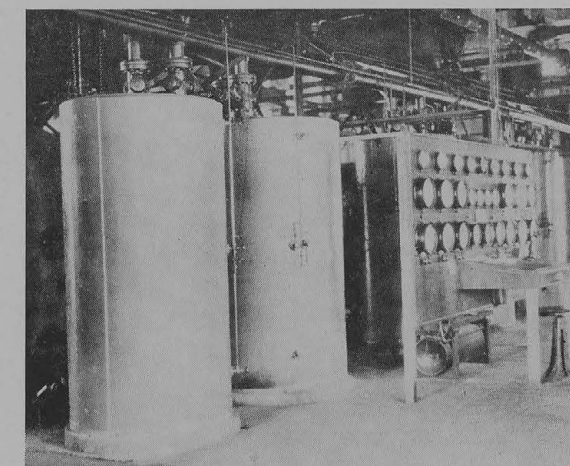
Front view, one of our 6-cylinder creosoting plants, showing transfer table for charging retorts in foreground. Retorts 7½ feet diameter by 132 feet long.

wood preservative is now produced to conform rigidly to specifications drawn by the American Railway Engineering Association and the American Wood-Preservers' Association. From the status of a by-product prior to the discovery of its toxic properties and of its adaptability to wood preservation, Coal Tar Creosote has become a commodity for which there is a world-wide demand and is produced to satisfy rigid specifications scientifically evolved.

Parallel with the development of a standard Coal Tar Creosote is the improvement and standardization of methods for its application as set forth in the specifications of the American Wood-Preservers' Association. These standards are adopted, in the essentials, by the Federal Government, The American Association of State Highway Officials, American Railway Engineering Association, and many other organizations.

Standard Coal Tar Creosote contains properties highly toxic to fungi, termites and marine borers, as proven by exhaustive laboratory tests and long and extensive service records. It has a specific gravity greater than

that of water; it is an oil, consequently cannot mix with, be dissolved in or carried away by water. It is dependably toxic to all forms of wood destroying organisms; permanent; available from a large number of suppliers; non-proprietary and moderate in cost.



This view of the retort control room in our Eagle Harbor Plant illustrates the high type of scientific control apparatus employed in the creosoting process. Constant study and research development over a period of many years, plus large investments in plant and equipment, has made it possible to produce a properly processed product which will fulfill the purpose for which it is intended.





PIERS 40 and 41, the great terminals of the Seattle Port Commission. These are the largest piers of this type in the world. All piling used in the construction of these piers is Creosoted Douglas Fir.

## Method of Treating Douglas Fir Piles with Creosote

The process of preserving timber with creosote consists essentially of two main steps:

1. Seasoning.
2. Impregnating with creosote.

The success of a wood treating operation depends largely upon the preparation of the timber to receive the preservative. All green timber requires a reduction in the moisture content before it can be satisfactorily impregnated. The removal of moisture from fiber and cells makes room for uniform distribution of the preservative.

Seasoning is accomplished by the Boulton Process or a combination of the Boulton

Process and air seasoning. This process is applied in the following manner:

The treating cylinder is filled with warm creosote so that all the timber is covered. The creosote is then heated to 190° F.-220° F., depending upon the size and moisture content of timber, while a vacuum of 20 inches or more is applied and held until the moisture content is reduced to a point where the wood is receptive to the injection of the preservative. The vacuum, which reduces the boiling point of moisture in the timber, together with the temperature of the wood heated by the surrounding creosote, causes this mois-

ture to evaporate. The evaporated moisture passes through a condenser and the rate of its accumulation is a measure of the progress of seasoning.

This process of removing moisture from timber has all the advantages of controlled kiln drying. It is accomplished at low temperatures, in a relatively short period, with complete freedom from injury to the wood structure and the timber is thoroughly sterilized against decay. Timber, seasoned by this method, is in a stabilized condition and natural seasoning checks are developed and impregnated during treatment, thus eliminating the hazard of any after treatment

checking. After the seasoning period is completed, creosote is injected into the timber under moderate hydraulic pressure until a specified amount is absorbed. The range of temperature and pressure are controlled to produce as deep and uniform penetration as the specified amount of oil will permit.

The usual absorption of not less than 12 pounds of Coal Tar Creosote per cubic foot of timber is recommended for permanent bearing and brace piles placed in marine waters, while for fender piles a minimum of 8 pounds per cubic foot is usually specified. The 8 pound absorption is recommended for piles and poles used in inland construction.

## Salvage Value of Creosoted Piles

Numerous cases are on record where structures have been abandoned or altered and the creosoted piles salvaged and used in other structures. Four typical cases are cited:

- (1) SANTA MONICA (California) LONG WHARF.

This wharf was built by the Southern Pacific Railroad in 1891 and 1892, using 132,000 linear feet of creosoted piles. The dock was dismantled in sections between 1916 and 1921 and most of the reclaimed piles were reused in land and marine structures, indicating their satisfactory condition after long service in the original structure.

- (2) TODD SHIP YARD at Tacoma, Washington.

Three thousand creosoted piles treated to a net retention of 12 pounds per cubic foot were driven in 1917 during the construction of this plant. All were pulled and salvaged in 1931. These salvaged piles have since been sold and redriven in various structures in Puget Sound. One dock where 300 of these reclaimed piles were used was examined by

a diver in 1937 and found to be in perfect condition.

- (3) SOUTHERN PACIFIC FERRY LANDINGS at Port Costa and Benecia, California.

These docks were driven in 1920 and contained 9,346 piles, lengths 40 feet to 115 feet, treated with Coal Tar Creosote to a net retention of 12 pounds per cubic foot, in accordance with the Southern Pacific Railroad specifications. On the abandonment of these docks, the piles were pulled and salvaged in 1931. The reclaimed piles have been used in various structures, including Southern Pacific Alameda and Park Avenue subways in San Jose.

- (4) PIER 5, PUGET SOUND NAVY YARD.

This pier was constructed in 1913 by the International Construction Company and later widened in 1921. The original dock contained 693 bearing, 264 brace and 22 bollard piles, while the new addition includes 411 bearing piles. This dock was dismantled in 1923 and all the piles except those damaged by mechanical injury were salvaged and later used in various structures in Puget Sound.



# Service Records of Creosoted Douglas Fir Piles

The following tabulation of representative service records of creosoted Douglas Fir piles, with others which are available, points to the long life and economic usefulness of this product. No other wood preservative has this enviable record.

## SEATTLE

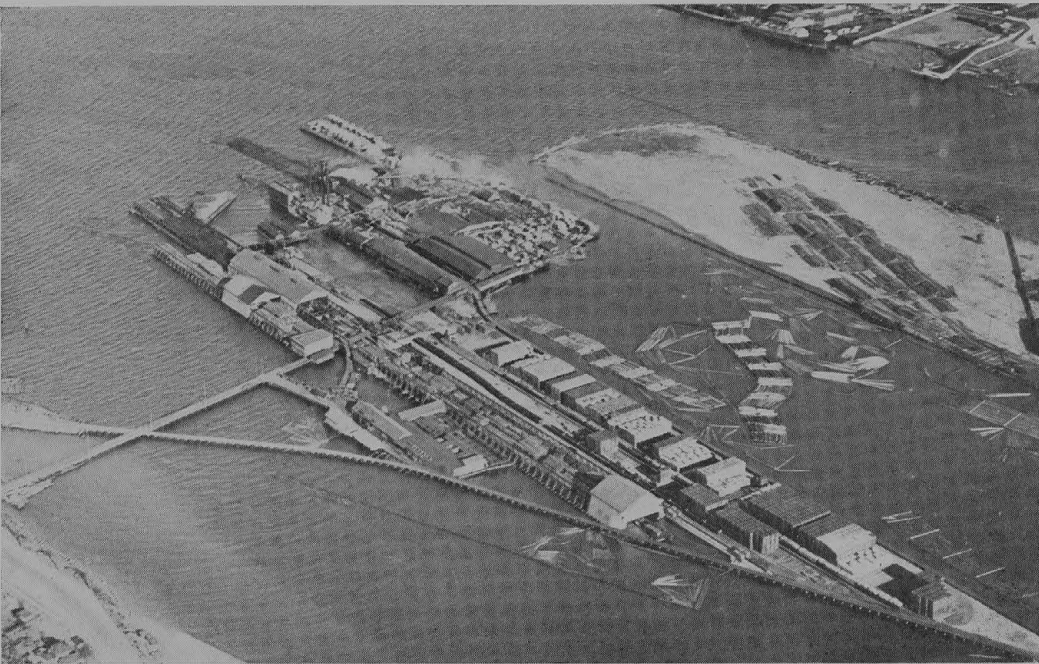
Pier	Year Installed	Lineal Feet Driven	REMARKS
Connecticut Street . . . . .	1918	111,855	Piling now being salvaged and re-used. Excellent condition.
Bell Street . . . . .	1913	228,993	Inspection 1928, less than 5% bad. 3,000 lin. ft. replacements to date.
Hanford Street . . . . .	1914	236,400	No replacements to date.
Lander Street . . . . .	1915	91,200	Good condition. No replacements.
Lenora Street "A" . . . . .	1915 & 1930	104,500	Majority of 1915 piles—fair. 1930 piles—OK.
Lenora Street "B" . . . . .	1918	81,000	Inspected 1930, none classified as bad.
Pier 40 . . . . .	1913	181,600	Inspected 1930, 4% bad. Estimate 10,000 lin. ft. replacements to date.
Pier 41 . . . . .	1919	269,000	12,000 lin. ft. replacements to date. Piling in fair condition.
Spokane Street . . . . .	1914-16	177,500	Fair condition. No replacements.
Stacy Street . . . . .	1915	104,780	No replacements to date.
		1,586,828	

NOTE: Piling driven at Pier 40 in 1913 were salvaged in 1930 and redriven at Lenora Street. 85% were in good condition. These records of properties owned and operated by the Port of Seattle are typical of many others located in the Puget Sound area.

## SAN FRANCISCO

Pier	Year Installed	Number Pieces	REMARKS
Pier 9 . . . . .	1911-15	1,680	Piles in poorer condition than other piers but still serviceable. Pier being replaced.
Pier 7 . . . . .	1912	936	Majority of piles serviceable but structure should be replaced.
Pier 20 . . . . .	1912	84	Piles serviceable.
Pier 14 . . . . .	1914	1,557	Majority piles still serviceable.
Pier 46 . . . . .	1914	2,275	Majority piles still serviceable. About 300 replacement piles driven.
Pier 46 Trestle . . . . .	1914	173	Trestle removed. Piles pulled and redriven various locations.
Pier 46 Bulkhead . . . . .	1914	179	Replaced with concrete. Bulkhead creosoted piling left in place and jacketed with concrete.
Pier 15 . . . . .	1914	1,379	Pier replaced. Creosoted piles left in place and concrete jacketed.
Pier 19 . . . . .	1914	528	Now being removed. Creosoted piles serviceable except for rotten tops and some defects caused by abrasion and long service wear.
Pier 23 . . . . .	1914	511	Removed 1932-33. Creosoted piles same as Pier 19.
Pier 25 . . . . .	1914	714	Piles all in service. Structure should be replaced.
Pier 27 Track . . . . .	1914	573	Piles for most part serviceable. Structure should be replaced.
Pier 41 . . . . .	1914	2,157	Majority of piles serviceable.
Pier 43 . . . . .	1914	533	Majority of piles serviceable.
Pier 16 . . . . .	1915	1,381	Majority of piles serviceable.
Pier 18 . . . . .	1915	1,381	Majority of piles serviceable.
Pier 22 . . . . .	1915	658	Majority of piles serviceable. In making alterations pulled piles and drove them with the small end up. All in service.
Pier 24 . . . . .	1915	1,452	Majority of piles serviceable.
Pier 11 . . . . .	1915	1,092	Piles all in service. Structure should be replaced.
Pier 21 . . . . .	1915	560	Pier removed. Piles serviceable except for some rotten spots and defects caused by abrasion.
Pier 37 . . . . .	1915	2,755	Majority of piles serviceable. Piers better than other piers, because of proximity of large sewers.
Pier 44 . . . . .	1917	1,057	Majority of piles serviceable. About 100 replacements made.
Pier 46 . . . . .	1917	329	Extension. Majority piles still serviceable.
Pier 42 . . . . .	1918	1,094	Majority of piles serviceable. About 100 replacements made.
Pier 43 . . . . .	1919	522	Extension. Majority of piles serviceable.

The above described existing docks, owned and operated by the California State Board of Harbor Commissioners, contain at least 25,000 Creosoted Douglas Fir piles. It is understood these docks were constructed for an anticipated life of 20 years, but that service record indicates with moderate renewals, 30 years of service will be realized, except in a few instances where structures were removed in about 20 to 25 years, in which cases, many piles were re-used for repairing old structures.



WEST SEATTLE PLANT

Inquiries on the proper use and adaptability of Creosoted Douglas Fir Timber are solicited. Our Chemical and Engineering Staff is readily available to assist in your problem.



EAGLE HARBOR PLANT

# WEST COAST WOOD PRESERVING CO.

Office: 1118 FOURTH AVENUE, SEATTLE      Plants: WEST SEATTLE and EAGLE HARBOR

10215371

1

St Paul 3/1-37

Mr Loom

Herewith one additional  
copy of West Coast Wood Preserving Co  
Contract dated Jan 26. 1937 in accordance  
with your request 3/27-38

Laquey



Brainerd, Minn., Feb. 27, 1937.

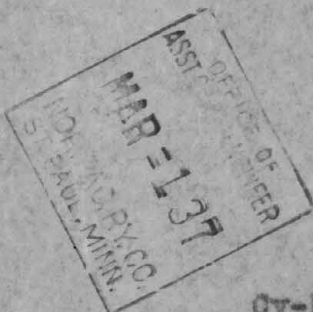
Mr. G. R. Hopkins,  
Mr. G. H. Stone.

I have today received from Mr. Yager (3) copies of the new agreement dated January 26th, 1937, and effective January 1st, 1937, between the West Coast Wood Preserving Company and the Northern Pacific Railway Company, covering the treating of ties and other material at Seattle.

Am sending one copy to Paradise to be kept on file there and two copies to Seattle. Mr. Stone should keep one copy at his office at the plant and the other at our down town office, Room 15, Freight House Building.

Please go over the various items carefully and let me know immediately in case there should be any discrepancy or question about application.

Kindly acknowledge receipt.



Gen'l. Supt. Tbr. Preservation.

Cy-Mr. L. Yager. ✓

*Mr. Yager - Could use one more copy if available.*

*2/27.*

*Sent to Mr. Stone*

St. Paul, Minnesota

February 26, 1937

Mr. A. J. Loom:

Herewith for your use three (3) copies of agreement dated January 26th, 1937, effective January 1st, between the West Coast Wood Preserving Company and the Northern Pacific Railway Company, covering the treating of ties and other material at Seattle.

encl.

TRG:m

*L. J. Yager*  
L. YAGER.

*sent*

Doc. No. 16820

Saint Paul, Minnesota  
February 25, 1937

Mr. H. E. Stevens, Vice President  
Mr. L. B. daPonte, Western Counsel, Seattle  
Mr. F. W. Sweney, Comptroller (3)  
Mr. E. R. Wales, District Accountant, Tacoma  
Mr. E. M. Willis, Purchasing Agent  
Mr. H. M. Smith, General Storekeeper  
Mr. W. C. Sloan, General Manager  
Mr. R. T. Taylor, Superintendent, Tacoma  
Mr. P. H. McCauley, General Supt. Transportation  
Mr. M. G. Crawford, Ass't Gen'l Sup't Trans., Seattle  
Mr. Bernard Blum, Chief Engineer (2)  
Mr. A. F. Stotler, Assistant Chief Engineer, Seattle  
➤ Mr. L. Yager, Assistant Chief Engineer System (6)  
Mr. A. J. Loom, Gen'l Sup't Lumber Preservation



Attached hereto is copy of agreement dated January 26, 1937, effective January 1, 1937, between West Coast Wood Preserving Company and Northern Pacific Railway Company covering the treating of ties and other material at Seattle, Wash.

This agreement supersedes one with the same parties dated January 31, 1930 which was an assignment of the original agreement with J. M. Colman Company dated November 4, 1926.

Kindly acknowledge receipt of same on the enclosed form.

A. M. Gottschald,  
Assistant Secretary.



CONTRACT made this 26th day of January, A.D. 1937, between the NORTHERN PACIFIC RAILWAY COMPANY, a Wisconsin corporation hereinafter called the "Railway Company", and the WEST COAST WOOD PRESERVING COMPANY, a Washington corporation hereinafter called the "Creosoting Company".

LY  
FJG  
BB  
In consideration of the mutual dependent promises stated in this contract the parties agree:

I. The Creosoting Company shall store for seasoning and treat at its plant located in the City of Seattle, Washington, such forest products as may be offered by the Railway Company from time to time in accordance with specifications in Exhibit "A" attached and made part of this contract. The term "forest products" used herein is inclusive of cross ties, bridge ties and switch ties, timber, lumber, piling and poles. It is understood and agreed that: (A) The Railway Company reserves the right to treat any portion or all of the forest products used by it in the territory tributary to the Creosoting Company's Seattle plant, in any one or more of the Railway Company's presently owned and individually operated treating plants. (b) The Railway Company shall offer to the Creosoting Company for treatment under the terms of this contract all forest products not reserved under the provisions of the foregoing paragraph (a).

II. The Creosoting Company agrees that its plant shall be maintained during the term of this agreement in such degree of working efficiency that the capacity of the plant shall be adequate at all times to treat the yearly requirements of the Railway Company.

III. The Railway Company will notify the Creosoting Company in writing prior to the first of October of each year of the approximate number of cross ties and other forest products which it desires to have stored for seasoning and subsequent treatment during the following calendar year.

IV. The forest products to be furnished hereunder shall be delivered on cars at the plant of the Creosoting Company. The Creosoting Company shall promptly unload cars and stack the material in the storage yard of the plant for seasoning. The Railway Company in making deliveries to the Creosoting Company shall have regard to its capacity for receiving and stacking material. The Creosoting Company shall pay the Railway Company compensation for any delays in unloading said cars in accordance with the rates set up in the Railway Company's published demurrage tariffs whenever eight (8) or less cars are delivered per day. Whenever more than eight (8) cars per day shall be delivered the expense incident to the detention of cars for unloading shall be assumed by the Railway Company. The Creosoting Company will accept delivery of forest products on scows or in rafts alongside its plant under the same conditions as outlined for delivery on cars, except that the Creosoting Company will not be required to pay the Railway Company for delays in unloading such scows or rafts.

V. The Railway Company will furnish open cars, in so far as may be possible, for delivery of untreated material and for shipment of treated material. The Railway Company at its own cost and expense will do all required switching of its cars of forest products billed to and from the plant. The Creosoting Company agrees to make requests for only such switching as is reasonably necessary and such switching shall be done so far as is practicable at times most convenient to the Railway Company between the hours of 7:00 A.M. and 6: P.M.

VI. All cross ties shall be properly segregated by grades on cars by the Railway Company to facilitate stacking for seasoning and subsequent treatment by grades. Switch ties, timber and piling delivered shall be sorted by the Creosoting Company at its own expense, for its convenience in handling for treatment.

VII. All treated material shall be loaded and billed as directed by the Railway Company. Cross ties will be loaded by grades and rail borings. Switch ties will be loaded by lengths. The Railway Company shall furnish promptly all cars required to ship out treated material. The Creosoting Company agrees to give the Railway Company at least five days' notice as to the time such cars are required.

VIII. The Creosoting Company shall provide fire protection for seasoning and storage yard satisfactory to the Railway Company.

The forest products shall remain the property of the Railway Company and be insured by it against loss by fire.

IX. The Creosoting Company agrees to count and tally material received in each car as soon as possible after receipt of car at its plant, either before or immediately after unloading, against invoice or inspection reports furnished by the Railway Company and to mail reports of such tally to the Railway Company's representative immediately after each invoice or inspection report has been tallied.

The Creosoting Company agrees that, as far as practicable, it shall have painted on each stack the initial, number, and out turn of each car from which material is unloaded, and the date of unloading.

The Creosoting Company agrees to return to the Railway Company the identical material shipped to it by the Railway Company after said material has been treated, and in case there should be any shortage whatever, the Creosoting Company agrees to pay the Railway Company therefor at the market price at Seattle, Washington, of like material at the time the shortage is discovered; provided, however, that the Creosoting Company shall not be responsible for shortage resulting from fire or causes which are clearly beyond its control. Joint inventories of all forest products shall be taken at least every six months, and discrepancies found adjusted at that time.

The Creosoting Company agrees to furnish reports of all material delivered, shipped, used, and on hand at regularly stated intervals as may be required by the Store Department or the Insurance Department of the Railway Company.

X. The Railway Company will furnish all creosote and petroleum oil required to treat its material under this agreement. The Creosoting Company agrees to unload and store all creosote and petroleum oil furnished by the Railway Company in railroad tank cars at the plant. The Creosoting Company agrees to set aside a storage tank with a capacity of 300,000 gallons for creosote furnished by the Railway Company. Creosote furnished by the Railway Company from vessels or barges shall be delivered into the storage tank without expense to the Creosoting Company. Should the Railway Company elect to permit the Creosoting Company to purchase creosote and oil for it, the prices to be paid and the quantities to be purchased for its account must be approved by the Railway Company, and the



material must conform to the current specifications of the Railway Company to be kept on file with the Creosoting Company. The Railway Company shall carry the insurance and pay the taxes on creosote and oil stored for it by the Creosoting Company, and agrees to pay promptly all invoices covering creosote and oil purchased with its authority for its account.

XI. The Creosoting Company agrees to provide storage tanks of suitable capacity to store the preservatives required for treating the material of the Railway Company, together with working tanks and proper gauges to insure accurate and satisfactory measurements of creosote and oil used in the treatment of the different classes of material for the Railway Company.

The Creosoting Company may, with the written consent of the Railway Company first had and obtained, use the preservatives belonging to the Railway Company for the purpose of treating forest products for other concerns in the same plant, and the Creosoting Company shall thereupon promptly replace preservatives so used with other preservatives meeting the specifications of the Railway Company and shall permit no delays in the treatment of Railway Company material to result from such use. In case the Creosoting Company shall be permitted such use of Railway Company preservatives, then joint inventories of preservatives shall be made at the end of each month or at any other appropriate time for the purpose of adjusting surplus or deficits. Any surplus or deficit must be prorated on the relative final retentions of preservatives for the different classes of material treated for the parties concerned.

XII. The Railway Company desires to have its cross ties treated during the months November to March, inclusive. The Creosoting Company agrees to use reasonable efforts with due regard to the business offered by other customers and the treating capacity of its plant to treat the yearly requirements in this interval if sufficient properly seasoned ties are available. If for any reason the Creosoting Company at any time cannot with reasonable effort carry out the aforementioned preferential arrangement, the Railway Company agrees to have delivered green ties in advance of requirements so that sufficient seasoned ties will be available for treatment at approximately uniform monthly rates for the yearly requirements.

XIII. The Creosoting Company agrees to store treated ties in its storage yard up to the convenient capacity for temporary storage at the request of the Railway Company. The storage and extra handling involved in loading into cars shall be compensated for at a price scheduled in this agreement.

XIV. The Creosoting Company agrees that upon the written request of the Railway Company to do so, it will accept any modification, changes or substitutions in the specifications in Exhibit "A" hereinbefore mentioned, provided such modifications, changes, or substitutions will not require the purchase of any additional equipment, or increase the cost to the Creosoting Company or lessen the plant capacity.

The Railway Company agrees that in the event a change of process is made, at its request, it will reimburse the Creosoting Company for any royalty the Creosoting Company may be required to pay in consequence thereof, and will also protect the Creosoting Company against all claims pertaining thereto.



XV. The Railway Company, through its designated representatives or agents, shall have access at all reasonable times to the plant and premises of the Creosoting Company and the right to inspect all operations therein, and shall be furnished all necessary and proper facilities for testing the preservatives employed and the amount absorbed by each charge of ties and other material treated for the Railway Company.

The Creosoting Company shall furnish records on forms furnished by the Railway Company of all treating operations to correspond to that which the Railway Company keeps at its own treating plants.

XVI. Should the parties disagree upon any question as to the true construction of any provision in this contract or concerning any violation of any such provision, such question shall be submitted to the arbitrament of three (3) disinterested persons familiar with such business. The party demanding such arbitration shall give to the other party notice of such demand, stating specifically the question to be submitted for decision and nominating a person who has the required qualifications to act as one arbitrator. If at the expiration of thirty (30) days from the receipt of such notice the party receiving it has not notified the party demanding the arbitration of its nomination of a second arbitrator having like qualifications, the party demanding such arbitration may apply, on thirty (30) days' notice to the other party, to a judge of any court of the United States for the appointment of a second arbitrator. Should the party to whom notice of arbitration is given not have appointed such arbitrator before the application shall come on for hearing before such judge, such second arbitrator shall be appointed by such judge, and shall thereupon be deemed an arbitrator within this section as if appointed by the party to whom such notice was given. The two arbitrators so appointed as aforesaid shall select a third arbitrator, and the three arbitrators so appointed shall constitute a Board of Arbitrators. In the event of the two arbitrators being unable to agree upon such third arbitrator, either party upon five (5) days' notice to the other may apply to a judge as aforesaid for the appointment of such third arbitrator, and when so appointed, such three arbitrators shall constitute the Board as aforesaid.

The third arbitrator shall have power to fix the time and place when and at which the arbitration shall proceed, but, in doing so, shall give due consideration to the reasonable convenience of the parties and their witnesses.

Upon such Board of Arbitration being completed, it shall proceed with reasonable diligence to inquire into the questions at issue as disclosed in such notice, and may take such evidence as it may deem reasonable or as either party may submit, without requiring witnesses to be sworn, and may hear argument of counsel or others. After the parties have been heard, it shall proceed to make its award in writing, and the same, when signed by two or more of the arbitrators, shall be final, binding and conclusive upon the parties.

The books and papers of both or all the parties, so far as they relate to any matter submitted to arbitration, shall be open to the examination of the arbitrators.

Until the arbitrators shall make their award upon any question submitted to them the business to be done and the settlements and payments to be made under the terms of this agreement shall continue to be done and made in the manner and form existing prior to the arising of such question.

Each party shall pay for the services and expenses incurred by arbitrator chosen by or for it and both parties shall jointly and equally pay for the services and expenses of the single or third arbitrator, together with all other and different expenses of the arbitration.

XVII. If at any time during the term of this agreement the operation of the Creosoting Company's plant shall be temporarily suspended because of fire, explosion, strikes, or other causes not within its control, the time during which the operation of this plant shall be suspended shall not be counted as a part of the term of this agreement, and a corresponding additional time shall be given it for performing its obligations under this agreement; provided, however, in case of the total or partial destruction of the said plant by fire or other cause the Creosoting Company shall promptly repair, rebuild and restore the same to substantially the same condition in which it was before such total or partial destruction and pending such reconstruction the Railway Company may remove its ties and other material from the seasoning yard for use untreated or if desired for treatment at its own or some other commercial plant.

XVIII. The Railway Company agrees to pay to the Creosoting Company for work performed and services rendered, as specified in this agreement, the following prices:

A-1	For the treatment of all seasoned cross ties, per thousand feet board measure.....	\$ 6.25 ✓
A-2	For treatment of unseasoned cross ties taken direct from incoming railroad cars, per thousand feet board measure .....	\$ 6.25 ✓
A-3	For treatment of unseasoned cross ties taken from stock piles in seasoning yard, per thousand feet board measure .....	\$ 6.70 ✓
B-1	For the treatment of all seasoned switch ties, per thousand feet board measure .....	\$ 8.00 ✓
B-2	For the treatment of unseasoned switch ties, taken direct from incoming railroad cars, per thousand feet board measure .....	\$ 8.00 ✓
B-3	For the treatment of unseasoned switch ties taken from stock piles in seasoning yard, per thousand feet board measure .....	\$ 8.60 ✓
B-4	For the treatment of bridge ties in cylinder capacity lots the conditions and prices of B-1, B-2, and B-3 shall apply. For the treatment of bridge ties in less than cylinder capacity lots, the conditions and prices of C-1, C-2, and C-3 shall apply.	
C-1	For the treatment of all sawed material other than cross ties and switch ties in cylinder charges of 30,000 feet board measure or less (the treating company being given the option of treating such charges separately or mixed with commercial material) per thousand feet board measure .....	\$12.80



- C-2 For the treatment of all sawed material other than cross ties and switch ties in cylinder charges in excess of 30,000 feet board measure which require a time duration of not longer than twelve (12) actual treating hours, per thousand feet board measure ..... \$ 10.20
- C-3 For the time in excess of twelve (12) <sup>actual</sup> treating hours required for treating material covered by paragraph C-2, per cylinder per hour or fraction thereof ..... \$ 5.10
- D-1 For the treatment of all piling, poles, and other similar material which requires a time duration not longer than twelve (12) actual treating hours, the Creosoting Company being given the option of treating quantities of less than a full cylinder charge either separately or combined with commercial material, per cubic foot ..... \$ 0.14
- D-2 For time in excess of twelve (12) actual treating hours required for treating material covered by paragraph D-1, with the understanding that where material is treated in the same charge with commercial material the time over twelve (12) actual hours will be pro-rated between the Railway and commercial material in the proportion that the volume of the material of each bears to the total volume in the charge, per cylinder per hour or fraction thereof ..... \$ 5.10
- D-3 The prices quoted in paragraphs D-1 and D-2 are predicated on the Railway Company having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment the Railway Company shall have the option of purchasing untreated piles at mutually agreeable prices from the stock of the Creosoting Company, or purchasing treated piles which meet the Railway Company's requirements from the Creosoting Company at its current commercial price.
- E-1 In cases where it is found, on account of unseasoned conditions of material, or other conditions not the responsibility of the Creosoting Company, an unsatisfactory treatment has been obtained and the Railway Company's inspector considers it advisable to segregate and re-treat all or any portion of cylinder charge of piles, it shall be done at the following rate for each re-treatment in addition to the prices mentioned in paragraphs D-1 and D-2:  
 (a) Two cents (\$.02) per cubic foot for piling, poles, and other similar material retreated. It is understood that entire cylinder charges returned for continuation of treatment without segregation of any part of the material shall not be considered as coming under the provisions of this E-1.
- E-2 For storage of treated cross ties after treatment and subsequent loading on cars, in addition to prices A-1, A-2, A-3, per tie ..... \$ 0.01



- E-3 For storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with the Railway Company's instructions for shipment, in addition to prices B-1, B-2, and B-3, per thousand feet board measure.. \$ 0.60
- E-4 For incising sawed material other than cross ties and switch ties including all handling not included under paragraphs C-1, C-2, C-3, necessary to accomplish it, per thousand feet board measure ..... \$ 0.50
- E-5 For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus ten (10) per cent to cover supervision and profit.

XIX. It is understood and agreed that the prices quoted under Section XVIII, Paragraphs A-1, A-2, A-3 and B-1, B-2, B-3, cover the unloading from railroad cars or barges, handling to the seasoning yard or to treating trams before treatment, moving them to boring, adzing and incising plant, boring, adzing and incising cross ties and incising switch ties, moving to cylinders, treating them and loading them from trams to railroad cars; and further that prices quoted under paragraph C-1, C-2, C-3 and D-1, D-2, D-3, cover unloading material from railroad cars or barges and rafts, handling to seasoning yard or to trams, moving to treating cylinders, treating and loading from trams on to railroad cars.

The "actual treating hours" is considered to be the actual normal time occupied while the ties or other materials are in the cylinder in the process of treatment as shown by the treating records. Delays caused by failure of the Creosoting Company's equipment, low steam pressure, etc., shall be deducted when computing overtime charges.

Where material of the Railway Company is treated in the same charge with commercial material as provided for in Section XVIII, paragraph C-1 and D-1, the Railway Company's stock of preservatives shall be charged with the calculated quantity required to treat its portion of the mixed load.

XX. The Creosoting Company agrees that, in case it, during the period of this agreement, makes contracts with other railroads directly or through their agents, for the treatment of forest products at prices lower than those scheduled in this agreement, then such lower prices shall become immediately effective in this contract.

XXI. The Railway Company will, on or before the thirtieth day of each month, pay to the Creosoting Company all sums owing to it at the end of the next preceding calendar month, upon proper bills, certified by the Railway Company's representative, rendered promptly by the Creosoting Company to the Railway Company.

XXII. In the event that either party hereto fails to carry out each and every obligation by it assumed under this contract, and such failure continues for a period of thirty (30) days, it is agreed that the aggrieved party may, at its option, cancel this agreement upon sixty (60) days' written

notice. It is agreed that this cancellation provision cannot be invoked in any issue which can properly be made the subject of arbitration, and disposed of in accordance with the provisions of paragraph XVI hereof.

XXIII. This agreement shall be effective as of January 1, 1937, and unless terminated in accordance with the provisions of paragraph XXII, shall remain in force for a period of five (5) years and shall continue thereafter until cancelled by either party giving one (1) year's written notice to the other party. The effective date of cancellation shall be as of December 31st following the year's notice. The earliest date of the year's notice of cancellation shall be January 1st, 1941. It is understood and agreed, however, that any forest products on hand for treatment at the termination of this contract shall be carried to treatment completion under the provisions of this agreement.

XXIV. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal is hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY  
By H. E. Stevens, Vice President

(SEAL) A. M. Gottschald  
Assistant Secretary

WEST COAST PRESERVING COMPANY  
L. C. Henry, President

(SEAL) A. D. Barrall  
Secretary

EXHIBIT "A" ATTACHED AND A PART OF CONTRACT DATED JANUARY 26, 1937 BETWEEN THE NORTHERN PACIFIC RAILWAY COMPANY AND THE WEST COAST WOOD PRESERVING COMPANY

Specifications covering the seasoning and treatment of cross and switch ties, ~~timber, lumber and piling.~~

### Seasoning

1. Green ties, ~~timber, lumber and piling~~ will be delivered by the Railway Co. at the plant of the ~~Cresosetting Co.~~ <sup>Treating Co.</sup> The ~~Cresosetting Co.~~ <sup>Treating Co.</sup> will unload all material and pile same for storage and seasoning, using a spacing which local experience indicates is the most favorable for efficient seasoning. Material shall be stored on non-decaying sills and the ground must be kept free of weeds and vegetation or fungus growths which would be injurious to the timber.

2. Material shall be permitted to remain in the seasoning yard until the Railway Company representative considers it suitable for treatment. It is the intention to season material to a point where it can be successfully treated, without artificial seasoning, <sup>to</sup> obtain the desired penetration.

3. The ~~Cresosetting Co.~~ <sup>Treating Co.</sup> shall save all car stakes, separators, etc., received with incoming material and make use of same for separators in seasoning, staking outgoing loads, etc.

### Boring, Adzing and Incising

4. Before treatment all cross ties shall be bored for spikes, adzed for seating tie plates and incised by Greenlee Brothers or other approved machine. The incisions are to be not less than three quarters (3/4) of an inch in depth and so spaced as to permit a uniform distribution of the preservative to the depth of the incisions. The Railway Co. shall furnish plans showing the boring spacing required for the different rail sections and also the dimensions of adzing areas.

5. ~~Incising of switch ties, timber and lumber will be optional with the Railway Company.~~

### Preservatives

45.55¢. The preservative for cross ~~and switch~~ ties shall be a 50-50 mixture of creosote and petroleum oil. The creosote shall conform to the American Railway Engineering Association specifications for Grade I Creosote Oil and be thoroughly mixed before using with California Crude Oil with an asphaltic base. ~~For timber, lumber and piling the preservative shall be straight American Railway Engineering Association Grade I Creosote.~~ The Railway Company may from time to time change the proportions of the mixture treatment or the specifications for Creosote and Oil.

### Moisture Content

6. All material to be treated in any one charge must have approximately the same moisture content.

### Material Sizes and Stripping

8. Material four inches or less in thickness must be treated separately from timbers of a greater thickness. Suffi-



cient strips must be placed between tiers in any case where, in the judgment of the Inspector, stripping is necessary to afford free circulation of preservatives around each piece.

#### Artificial Seasoning

8. When material has not been air seasoned, it may be artificially seasoned, at the option of the Railway Co., in the treating cylinders by boiling under vacuum at temperatures ranging from 180° F. to a maximum of 200° F. as follows:

9. 10. After the material is placed in the treating cylinder, preservative heated to about 160° F. shall be admitted until the material is completely immersed. A vacuum shall then be created and gradually raised until a minimum of 20 inches is reached and this vacuum is to be maintained until the condensation passing off from the timber and accumulated in the hot well of the condenser does not exceed one-tenth of a pound per cubic foot of timber in charge per hour.

11. After the completion of the seasoning period, or bath, Paragraph 12, upon breaking the vacuum the preservative shall be immediately drained completely from the treating cylinder. This draining need not be done in case the water content of the preservative in the cylinder is not objectionable in the opinion of the inspector.

#### Preparatory Bath for Air Seasoned Material

12. All thoroughly air seasoned material must be held in a hot oil bath for a period of 2 to 8 hours at a temperature of about 180° F. in order to obtain the necessary absorption without the use of excessive pressure for a long period of time.

#### Treatment

13. Empty Cell Process without initial air pressure shall be used.

#### Injection of Preservative Under Pressure.

13. 14. Following the heating or the artificial seasoning period, the cylinder shall be filled with Preservative and pressure applied as required to a maximum of 160 pounds per square inch and maintained until the specified penetration or final absorption of preservative has been obtained. The maximum pressure in the case of cross and switch ties shall be 150 pounds per square inch. The temperature of the preservative during the pressure period shall be as high as possible, with a minimum limit of 160° F. and a maximum of 200° F.

14. 15. After pressure is completed the cylinders shall be emptied of preservatives and a vacuum of at least 25 inches of mercury promptly created and maintained for a sufficient period of time to free the material of dripping preservative.

#### Penetration Cross and Switch Ties and ~~Piling~~

15. 16. The minimum penetration of preservative shall be 3/4 of an inch. Representative ties from each charge must be tested for penetration, and at least 75% of the ties so tested must show the above specified minimum. In determining penetration, light discoloration of the wood from treatment shall not be considered.

# Exhibit "A"

-3-

The minimum penetration on every pile shall be not less than one inch of black oil.

## Penetration Timber and Lumber

17. The average depths of penetration for the specified amount of preservative shall be as follows:

Size	12#	14#	16#
3"x12" & 4"x12"			.50 inch
6"x12"	.50 inch	.55 inch	.65 inch
12"x12" & larger	.75 inch	.85 inch	1.00 inch

The penetration must be based on black oil. Representative pieces from each charge must be tested for penetration and at least 75% of these pieces so tested must show the above specified minimum.

## Penetration and Final Retention - General

<sup>16</sup> 17 18. The penetration rather than the final retention of preservative shall govern as to the acceptance of treatment. The preservative finally retained by cross ~~and switch~~ ties shall be as nearly as possible 8 pounds per cubic foot of timber. ~~For piles the retention shall be similarly 16 pounds per cubic foot of timber. For timber and lumber this penetration is likewise outlined in paragraph 17.~~ The treating plant shall be provided with the necessary gauges, measuring devices and appliances required to observe and record the gross and final retention of preservative in order that the Railway Company may be assured of obtaining the minimum specified penetration with the minimum amount of preservative.

<sup>17</sup> 18 19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

## Retreatment

<sup>18</sup> 19 20. In case unsatisfactory penetration or final retention of preservative should warrant retreatment or continuation of treatment of segregated material or the entire charge, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

## Damaged Material

*Treating Company*

<sup>19</sup> 20 21. Material damaged through improper treatment or handling by the Treating Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

## General Conditions

<sup>20</sup> 21 22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

Exhibit "A"

-4-

<sup>21</sup> ~~22~~ <sup>23</sup> ~~24~~ <sup>Treating</sup> 25. All holes bored for test purposes must be plugged with creosoted plugs furnished by the ~~Creosoting~~ Co. ✓

<sup>22</sup> ~~23~~ <sup>24</sup> ~~25~~ 26. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

<sup>24</sup> ~~25~~ <sup>23</sup> ~~24~~ <sup>Treating</sup> 25. The ~~Creosoting~~ Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

<sup>24</sup> ~~25~~ <sup>23</sup> ~~24~~ <sup>Treating</sup> 26. The ~~Creosoting~~ Co. shall permit the Railway Company inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

<sup>25</sup> ~~26~~ <sup>24</sup> ~~25~~ <sup>Treating</sup> 27. The ~~Creosoting~~ Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification. ✓

St. Paul Minnesota.

September 28th 1937



February 6, 1937

Mr. A. D. Barrall  
Secretary - Treasurer  
West Coast Wood Preserving Co.  
1118 - 4th Ave. at Seneca St.  
Seattle, Washington

Dear Sir:

Referring to your letter of February  
2nd calling attention to an omission in your  
executed copy of contract dated January 26th:

I have arranged to have the corporate  
seal affixed and attested by the Assistant Secretary  
who is authorized to attest such documents.

Trusting that this now meets with your  
approval, I am,

Yours very truly,

L. YAGER.

encl.

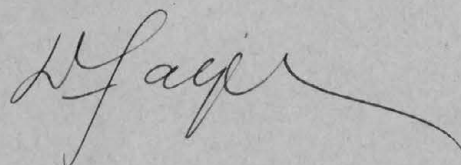
St. Paul, Minnesota

February 5, 1937.

Mr. Bernard Blum:

Referring to the attached letter from Mr.

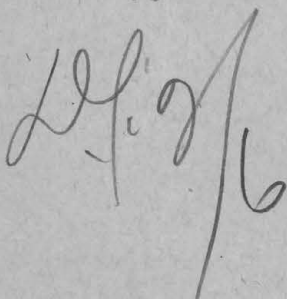
A. D. Barrall, Secretary-Treasurer of the West Coast  
Wood Preserving Company, of February 2nd requesting com-  
pliance with the last paragraph of the contract requir-  
ing fixing of corporate seal and attesting by our  
secretary:



*Mr. Gage - Contract returned with  
seal and signature of assistant  
secretary*

*Bernard Blum*

*2/5*



L. J. COLMAN  
PRESIDENT

L. C. HENRY  
VICE - PRESIDENT

A. D. BARRALL  
SECRETARY - TREASURER

H. E. HORROCKS  
MANAGER

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

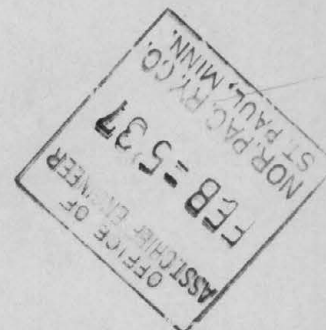
SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.

February 2, 1937

CABLE ADDRESS  
"CREOSOTE"



L. Yager, Assistant Chief Engineer  
Northern Pacific Railway Company  
Saint Paul, Minnesota

Dear Sir:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.  
**TERMS:** NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.  
**INSPECTION** AND/OR ACCEPTANCE OF MATERIAL AT OUR PLANTS IS TO BE FINAL.

We are returning herewith our copy of contract covering treatment of forest products, for completion of signature which does not seem to coincide with the last paragraph which calls for the fixing of the corporate seal and attesting by the Secretary.

Will you please have this completed and return to us.

Yours very truly,

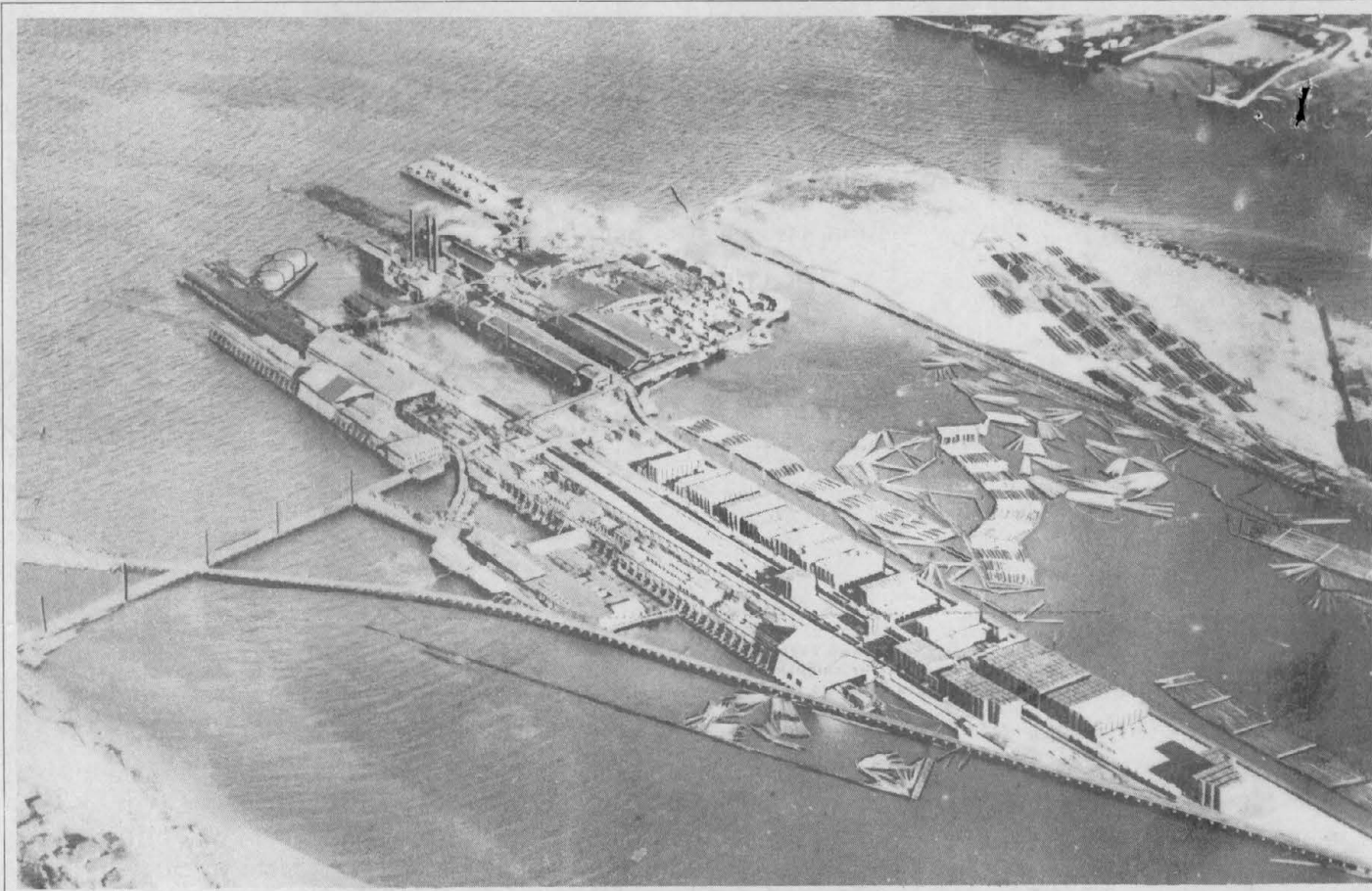
WEST COAST WOOD PRESERVING CO.

By

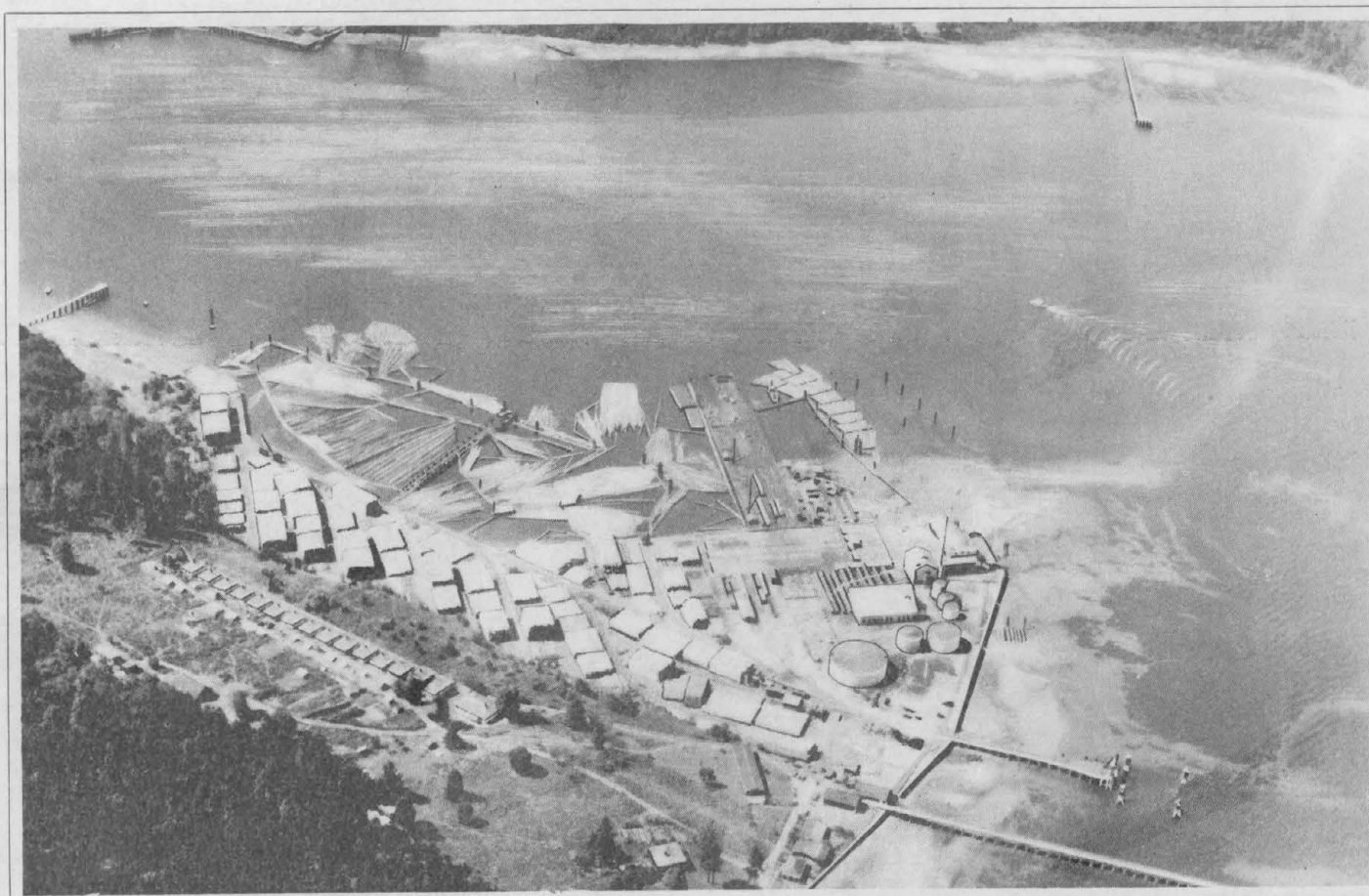
Secretary-Treasurer

ADB:I  
enc.





AERIAL VIEW OF MANUFACTURING PLANTS



January 30, 1937.

Mr. H. E. Horrocks  
Manager -  
West Coast Wood Preserving Co.  
1118 - 4th Avenue  
Seattle, Washington

Dear Mr. Horrocks:

I am attaching hereto your copy of contract covering treatment of forest products at your plant executed by Northern Pacific Vice President under date of January 26, 1937.

Kindly acknowledge receipt.

Yours very truly,

L. YAGER.

encl.

L. C. HENRY  
~~L. C. HENRY~~  
PRESIDENT

KENNETH B. COLMAN  
~~L. C. HENRY~~  
VICE - PRESIDENT

A. D. BARRALL  
SECRETARY - TREASURER

H. E. HORROCKS  
MANAGER

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.

January 25, 1937

L. Yager, Asst. Chief Engineer  
Northern Pacific Railway Company  
Saint Paul, Minnesota

Dear Mr. Yager:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.  
**TERMS:** NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.  
INSPECTION AND/OR ACCEPTANCE OF MATERIAL AT OUR PLANTS IS TO BE FINAL.

Acknowledging yours of the 22nd with blueprint enclosures.

We have made comparison with the original contract and also the draft for renewal of same, and agree with you that these corrections while desirable are minor in character and do not alter the essence of the new contract.

Yours very truly,

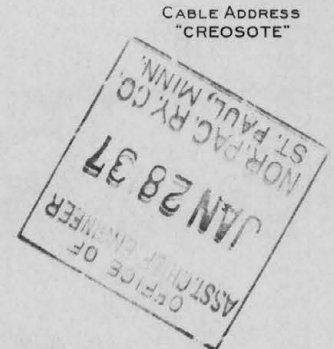
WEST COAST WOOD PRESERVING CO.

By

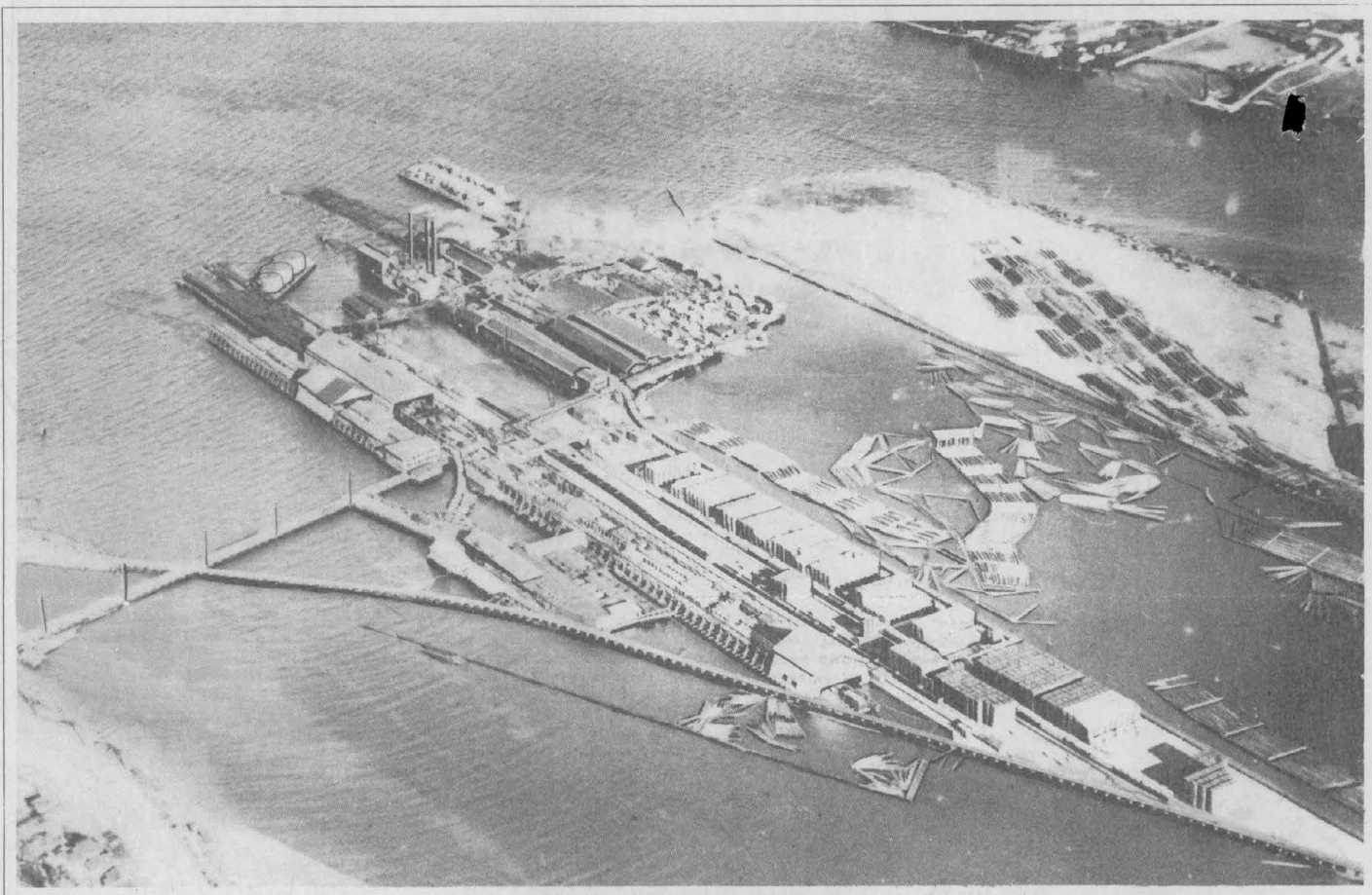
Manager

HEH:I

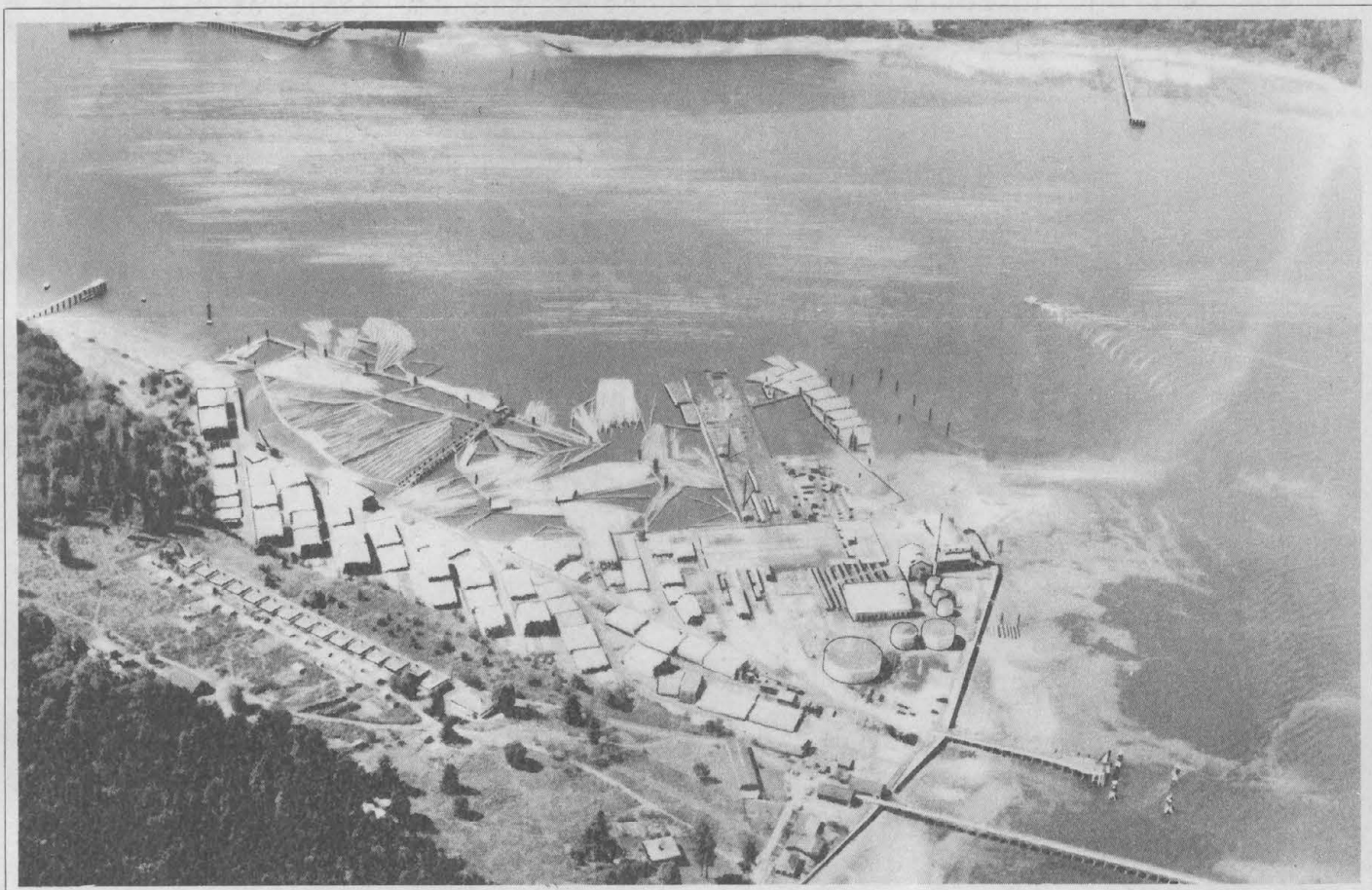
*2-1/1/37*







AERIAL VIEW OF MANUFACTURING PLANTS



St. Paul, Minnesota

January 22, 1937.

Mr. A. M. Gottschald:

There has just been submitted to the Vice President for execution new contract with the West Coast Wood Preserving Company for creosoting ties and timber at Seattle, Washington. This should reach you shortly.

When this is being prepared for circulation I would be glad if you would let me have six (6) copies for use of our tie treating plants, etc.

TRG:m

L. YAGER

St. Paul, Minnesota

January 22, 1937.

Mr. Bernard Blum:

I am attaching hereto the original and duplicate of the draft of contract between the Northern Pacific and the West Coast Wood Preserving Company.

These two copies have been properly executed by the appropriate officers of the Wood Preserving Company.

L. YAGER.

encl.



January 22, 1937.

Mr. H. E. Horrocks, Manager  
West Coast Wood Preserving Co.  
1118 - 4th Avenue at Seneca Street  
Seattle, Washington

Dear Mr. Horrocks:

Your letter of January 19th returning the two executed copies of contract draft were received today.

After sending you the two copies of the contract with my letter of January 12th, we made a very critical editing review of the drafts and found the following changes:

In Paragraph 3, the word "desired" has been changed to "desires".

In Paragraph 12, the word "sufficient" has been used instead of "sufficiently".

In Paragraph 19 on top of page 6, the word "and" has been added between the words "treating" and "loading". To avoid conflict with the new price schedule, the last sentence of this paragraph has been deleted.

In Specification 4 of Exhibit A, the word "rail" has been added between the words "different" and "sections" in the last line.

In Specification 20 of Exhibit A under "Retreatment" we have thought it best to rewrite this paragraph to avoid any possible conflict with the provisions of paragraphs A-1, A-2, A-3, B-1, B-2, B-3, B-4 and C-1 of the new contract price schedules.

I have taken the liberty to make these minor corrections before sending the contract for execution on the part of our officers. I am attaching hereto two blueprint copies of the draft as now revised.

Yours very truly,

L. YAGER.

encl.

L. C. HENRY  
COLMAN  
PRESIDENT

KENNETH B. COLMAN  
HENRY  
VICE - PRESIDENT

A. D. BARRALL  
SECRETARY - TREASURER

H. E. HORROCKS  
MANAGER

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.

January 19, 1937

CABLE ADDRESS  
"CREOSOTE"

L. Yager, Assistant Chief Engineer  
Northern Pacific Railway Company  
Saint Paul, Minnesota

Dear Mr. Yager:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.  
**TERMS:** NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.  
**INSPECTION** AND/OR ACCEPTANCE OF MATERIAL AT OUR PLANTS IS TO BE FINAL.

We have carefully reviewed and compared the two copies of draft of contract which were enclosed with your letter of January 12 and are returning them to you herewith, having been executed by proper officials of our company.

We very much appreciate the renewal of contract for treating your material. Relations with your company in the light of the preceding contract have been most pleasant and satisfactory and we anticipate that all concerned will be happy in working under the new contract.

With personal regards,

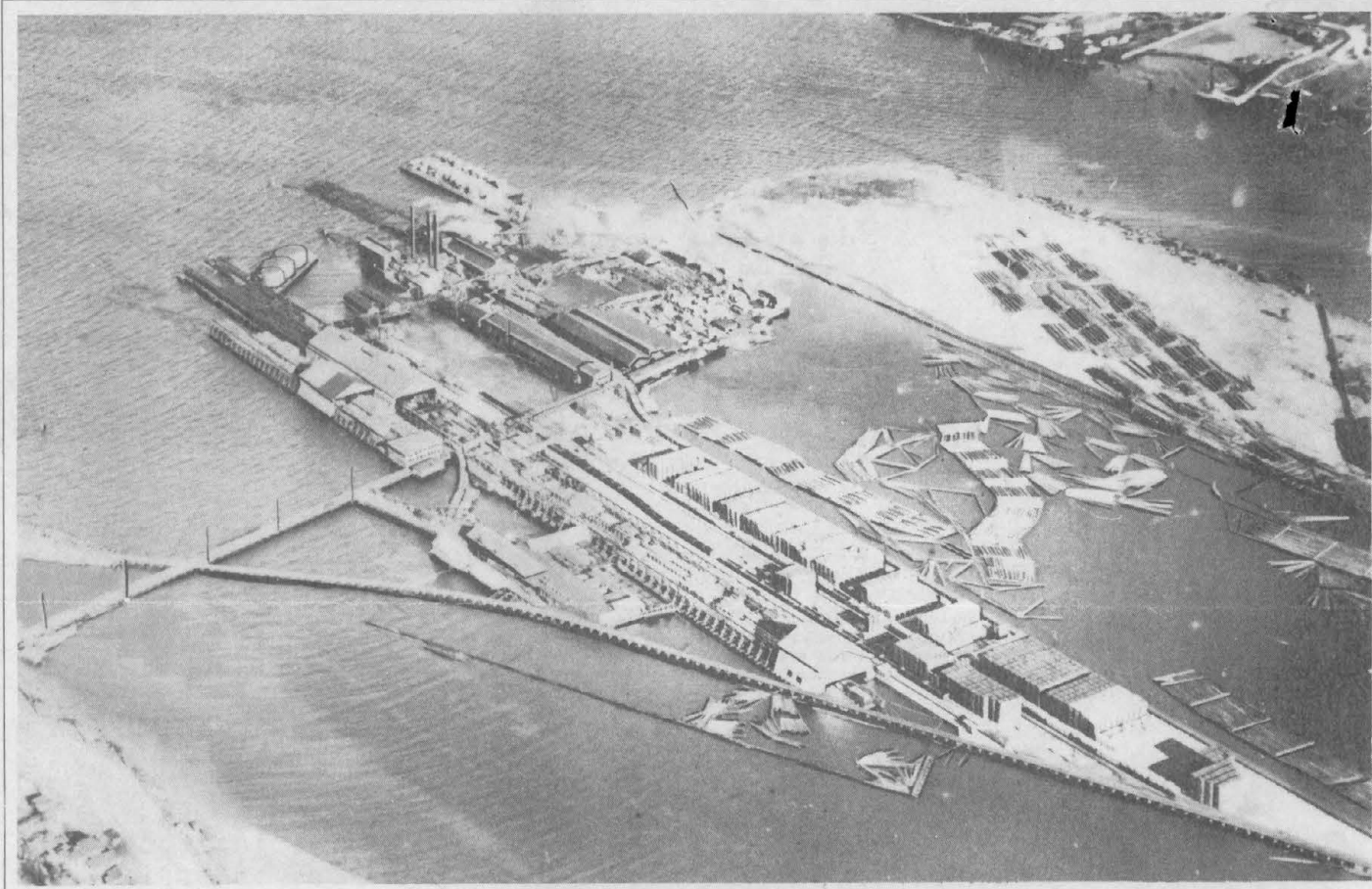
Yours very truly,

Manager

HEH:I







AERIAL VIEW OF MANUFACTURING PLANTS





CONTRACT made this \_\_\_\_\_ day of \_\_\_\_\_, A. D. 1936, between the NORTHERN PACIFIC RAILWAY COMPANY, a Wisconsin corporation hereinafter called the "Railway Company", and the WEST COAST WOOD PRESERVING COMPANY, a Washington corporation hereinafter called the "Creosoting Company".

In consideration of the mutual dependent promises stated in this contract the parties agree:

I. The Creosoting Company shall store for seasoning and treat at its plant located in the City of Seattle, Washington, such forest products as may be offered by the Railway Company from time to time in accordance with specifications in Exhibit "A" attached and made part of this contract. The term "forest products" used herein is inclusive of cross ties, bridge ties and switch ties, timber, lumber, piling, and poles. It is understood and agreed that: (a) The Railway Company reserves the right to treat any portion or all of the forest products used by it in the territory tributary to the Creosoting Company's Seattle plant, in any one or more of the Railway Company's presently owned and individually operated treating plants. (b) The Railway Company shall offer to the Creosoting Company for treatment under the terms of this contract all forest products not reserved under the provisions of the foregoing paragraph (a).

II. The Creosoting Company agrees that its plant shall be maintained during the term of this agreement in such degree of working efficiency that the capacity of the plant shall be adequate at all times to treat the yearly requirements of the Railway Company.

III. The Railway Company will notify the Creosoting Company in writing prior to the first of October of each year of the approximate number of cross ties and other forest products which it desires to have stored for seasoning and subsequent treatment during the following calendar year.

IV. The forest products to be furnished hereunder shall be delivered on cars at the plant of the Creosoting Company. The Creosoting Company shall promptly unload cars and stack the material in the storage yard of the plant for seasoning. The Railway Company in making deliveries to the Creosoting Company shall have regard to its capacity for receiving and stacking material. The Creosoting Company shall pay the Railway Company compensation for any delays in unloading said cars in accordance with the rates set up in the Railway Company's published demurrage tariffs whenever eight (8) or less cars are delivered per day. Whenever more than eight (8) cars per day shall be delivered the expense incident to the detention of cars for unloading shall be assumed by the Railway Company. The Creosoting Company will accept delivery of forest products on scows or in rafts alongside its plant under the same conditions as outlined for delivery on cars, except that the Creosoting Company will not be required to pay the Railway Company for delays in unloading such scows or rafts.

V. The Railway Company will furnish open cars, in so far as may be possible, for delivery of untreated material and for shipment of treated material. The Railway Company at its own cost and expense will do all required switching of its cars of forest products billed to and from the plant. The Creosoting Company agrees to make requests for only such switching as is reasonably necessary and such switching shall be done so far as is practicable at times most convenient to the Railway Company between the hours of 7:00 A. M. and 6:00 P. M.

VI. All cross ties shall be properly segregated by grades on cars by the Railway Company to facilitate stacking for seasoning and subsequent treatment by grades. Switch ties, timber and piling delivered shall be sorted by the Creosoting Company at its own expense, for its convenience in handling for treatment.

VII. All treated material shall be loaded and billed as directed by the Railway Company. Cross ties will be loaded by grades and rail borings. Switch ties will be loaded by lengths.

The Railway Company shall furnish promptly all cars required to ship out treated material. The Creosoting Company agrees to give the Railway Company at least five days' notice as to the time such cars are required.



VIII. The Creosoting Company shall provide fire protection for seasoning and storage yard satisfactory to the Railway Company.

The forest products shall remain the property of the Railway Company and be insured by it against loss by fire.

IX. The Creosoting Company agrees to count and tally material received in each car as soon as possible after receipt of car at its plant, either before or immediately after unloading, against invoice or inspection reports furnished by the Railway Company and to mail reports of such tally to the Railway Company's representative immediately after each invoice or inspection report has been tallied.

The Creosoting Company agrees that, as far as practicable, it shall have painted on each stack the initial, number, and out turn of each car from which material is unloaded, and the date of unloading.

The Creosoting Company agrees to return to the Railway Company the identical material shipped to it by the Railway Company after said material has been treated, and in case there should be any shortage whatever, the Creosoting Company agrees to pay the Railway Company therefor at the market price at Seattle, Washington, of like material at the time the shortage is discovered; provided, however, that the Creosoting Company shall not be responsible for shortage resulting from fire or causes which are clearly beyond its control. Joint inventories of all forest products shall be taken at least every six months, and discrepancies found adjusted at that time.

The Creosoting Company agrees to furnish reports of all material delivered, shipped, used, and on hand at regularly stated intervals as may be required by the Store Department or the Insurance Department of the Railway Company.

X. The Railway Company will furnish all creosote and petroleum oil required to treat its material under this agreement. The Creosoting Company agrees to unload and store all creosote and petroleum oil furnished by the Railway Company in railroad tank cars at the plant. The Creosoting Company agrees to set aside a storage tank with a capacity of 300,000 gallons for creosote furnished by the Railway Company. Creosote furnished by the Railway Company from vessels or barges shall be delivered into the storage tank without expense to the Creosoting Company. Should the Railway Company elect to permit the Creosoting Company to purchase creosote and oil for it, the prices to be paid and the quantities to be purchased for its account must be approved by the Railway Company, and the material must conform to the current specifications of the Railway Company to be kept on file with the Creosoting Company. The Railway Company shall carry the insurance and pay the taxes on creosote and oil stored for it by the Creosoting Company, and agrees to pay promptly all invoices covering creosote and oil purchased with its authority for its account.

XI. The Creosoting Company agrees to provide storage tanks of suitable capacity to store the preservatives required for treating the material of the Railway Company, together with working tanks and proper gauges to insure accurate and satisfactory measurements of creosote and oil used in the treatment of the different classes of material for the Railway Company.

The Creosoting Company may, with the written consent of the Railway Company first had and obtained, use the preservatives belonging to the Railway Company for the purpose of treating forest products for other concerns in the same plant, and the Creosoting Company shall thereupon replace preservatives so used with other preservatives meeting the specifications of the Railway Company and shall permit no delays in the treatment of Railway Company material to result from such use. In case the Creosoting Company shall be permitted such use of Railway Company preservatives, then joint inventories of preservatives shall be made at the end of each month or at any other appropriate time for the purpose of adjusting surplus or deficits. Any surplus or deficit must be pro-rated on the relative final retentions of preservatives for the different classes of material treated for the parties concerned.



XII. The Railway Company desires to have its cross ties treated during the months November to March, inclusive. The Creosoting Company agrees to use reasonable efforts with due regard to the business offered by other customers and the treating capacity of its plant to treat the yearly requirements in this interval if sufficient properly seasoned ties are available. If for any reason the Creosoting Company at any time cannot with reasonable effort carry out the aforementioned preferential arrangement, the Railway Company agrees to have delivered green ties in advance of requirements so that sufficient seasoned ties will be available for treatment at approximately uniform monthly rates for the yearly requirements.

XIII. The Creosoting Company agrees to store treated ties in its storage yard up to the convenient capacity for temporary storage at the request of the Railway Company. The storage and extra handling involved in loading into cars shall be compensated for at a price scheduled in this agreement.

XIV. The Creosoting Company agrees that upon the written request of the Railway Company to do so, it will accept any modification, changes or substitutions in the specifications in Exhibit "A" hereinbefore mentioned, provided such modifications, changes, or substitutions will not require the purchase of any additional equipment, or increase the cost to the Creosoting Company or lessen the plant capacity.

The Railway Company agrees that in the event a change of process is made, at its request, it will reimburse the Creosoting Company for any royalty the Creosoting Company may be required to pay in consequence, thereof, and will also protect the Creosoting Company against all claims pertaining thereto.

XV. The Railway Company, through its designated representatives or agents, shall have access at all reasonable times to the plant and premises of the Creosoting Company and the right to inspect all operations therein, and shall be furnished all necessary and proper facilities for testing the preservatives employed and the amount absorbed by each charge of ties and other material treated for the Railway Company.

The Creosoting Company shall furnish records on forms furnished by the Railway Company of all treating operations to correspond to that which the Railway Company keeps at its own treating plants.

XVI. Should the parties disagree upon any question as to the true construction of any provision in this contract or concerning any violation of any such provision, such question shall be submitted to the arbitrament of three (3) disinterested persons familiar with such business. The party demanding such arbitration shall give to the other party notice of such demand, stating specifically the question to be submitted for decision and nominating a person who has the required qualifications to act as one arbitrator. If at the expiration of thirty (30) days from the receipt of such notice the party receiving it has not notified the party demanding the arbitration of its nomination of a second arbitrator having like qualifications, the party demanding such arbitration may apply, on thirty (30) days' notice to the other party, to a judge of any court of the United States for the appointment of a second arbitrator. Should the party to whom notice of arbitration is given not have appointed such arbitrator before the application shall come on for hearing before such judge, such second arbitrator shall be appointed by such judge, and shall thereupon be deemed an arbitrator within this section as if appointed by the party to whom such notice was given. The two arbitrators so appointed as aforesaid shall select a third arbitrator, and the three arbitrators so appointed shall constitute a Board of Arbitrators. In the event of the two arbitrators being unable to agree upon such third arbitrator, either party upon five (5) days' notice to the other may apply to a judge as aforesaid for the appointment of such third arbitrator, and when so appointed, such three arbitrators shall constitute the Board as aforesaid.

The third arbitrator shall have power to fix the time and place when and at which the arbitration shall proceed, but, in doing so, shall give due consideration to the reasonable convenience of the parties and their witnesses.

Upon such Board of Arbitration being completed, it shall proceed with reasonable diligence to inquire into the questions at issue as disclosed in such notice, and may take such evidence as it may deem reasonable or as either party may submit, without requiring witnesses to be sworn, and may hear argument of counsel or others. After the parties have been heard, it shall proceed to make its award in



writing, and the same, when signed by two or more of the arbitrators, shall be final, binding and conclusive upon the parties.

The books and papers of both or all the parties, so far as they relate to any matter submitted to arbitration, shall be open to the examination of the arbitrators.

Until the arbitrators shall make their award upon any question submitted to them, the business to be done and the settlements and payments to be made under the terms of this agreement shall continue to be done and made in the manner and form existing prior to the arising of such question.

Each party shall pay for the services and expenses incurred by arbitrator chosen by or for it and both parties shall jointly and equally pay for the services and expenses of the single or third arbitrator, together with all other and different expenses of the arbitration.

XVII. If at any time during the term of this agreement the operation of the Creosoting Company's plant shall be temporarily suspended because of fire, explosion, strikes, or other causes not within its control, the time during which the operation of this plant shall be suspended shall not be counted as a part of the term of this agreement, and a corresponding additional time shall be given it for performing its obligations under this agreement; provided, however, in case of the total or partial destruction of the said plant by fire or other cause the Creosoting Company shall promptly repair, rebuild and restore the same to substantially the same condition in which it was before such total or partial destruction and pending such reconstruction the Railway Company may remove its ties and other material from the seasoning yard for use untreated or if desired for treatment at its own or some other commercial plant.

XVIII. The Railway Company agrees to pay to the Creosoting Company for work performed and services rendered, as specified in this agreement, the following prices:

A-1	For the treatment of all seasoned cross ties, per thousand feet board measure .....	\$ 6.25
A-2	For treatment of unseasoned cross ties taken direct from incoming railroad cars, per thousand feet board measure .....	\$ 6.25
A-3	For treatment of unseasoned cross ties taken from stock piles in seasoning yard, per thousand feet board measure .....	\$ 5.70
B-1	For the treatment of all seasoned switch ties, per thousand feet board measure .....	\$ 8.00
B-2	For the treatment of unseasoned switch ties taken direct from incoming railroad cars, per thousand feet board measure .....	\$ 8.00
B-3	For the treatment of unseasoned switch ties taken from stock piles in seasoning yard, per thousand feet board measure .....	\$ 8.60
B-4	For the treatment of bridge ties in cylinder capacity lots the conditions and prices of B-1, B-2, and B-3 shall apply. For the treatment of bridge ties in less than cylinder capacity lots, the conditions and prices of C-1, C-2, and C-3 shall apply.	
C-1	For the treatment of all sawed material other than cross ties and switch ties in cylinder charges of 30,000 feet board measure or less (the treating company being given the option of treating such charges separately or mixed with commercial material) per thousand feet board measure .....	\$ 12.80
C-2	For the treatment of all sawed material other than cross ties and switch ties in cylinder charges in excess of 30,000 feet board measure which require a time duration of not longer than twelve (12) actual treating hours, per thousand feet board measure .....	\$ 10.20

- C-3 For the time in excess of twelve (12) actual treating hours required for treating material covered by paragraph C-2, per cylinder per hour or fraction thereof ..... \$ 5.10
- D-1 For the treatment of all piling, poles, and other similar material which requires a time duration not longer than twelve (12) actual treating hours, the Creosoting Company being given the option of treating quantities of less than a full cylinder charge either separately or combined with commercial material, per cubic foot ... \$ 0.14
- D-2 For time in excess of twelve (12) actual treating hours required for treating material covered by paragraph D-1, with the understanding that where material is treated in the same charge with commercial material the time over twelve (12) actual hours will be pro-rated between the Railway and commercial material in the proportion that the volume of the material of each bears to the total volume in the charge, per cylinder per hour or fraction thereof ..... \$ 5.10
- D-3 The prices quoted in paragraphs D-1 and D-2 are predicated on the Railway Company having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment the Railway Company shall have the option of purchasing untreated piles at mutually agreeable prices from the stock of the Creosoting Company, or purchasing treated piles which meet the Railway Company's requirements from the Creosoting Company at its current commercial price.
- E-1 In cases where it is found, on account of unseasoned conditions of material, or other conditions not the responsibility of the Creosoting Company, an unsatisfactory treatment has been obtained and the Railway Company's inspector considers it advisable to segregate and re-treat all or any portion of cylinder charge of piles, it shall be done at the following rate for each re-treatment in addition to the prices mentioned in paragraphs D-1 and D-2:  
(a) Two cents (\$.02) per cubic foot for piling, poles, and other similar material retreated. It is understood that entire cylinder charges returned for continuation of treatment without segregation of any part of the material shall not be considered as coming under the provisions of this E-1.
- E-2 For storage of treated cross ties after treatment and subsequent loading on cars, in addition to prices A-1, A-2, A-3, per tie ..... \$ 0.01
- E-3 For storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with the Railway Company's instructions for shipment, in addition to prices B-1, B-2, and B-3, per thousand feet board measure ..... \$ 0.60
- E-4 For incising sawed material other than cross ties and switch ties including all handling not included under paragraphs C-1, C-2, C-3, necessary to accomplish it, per thousand feet board measure ..... \$ 0.50
- E-5 For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus ten (10) per cent to cover supervision and profit.

- - - - -

XIX. It is understood and agreed that the prices quoted under Section XVIII, Paragraphs A-1, A-2, A-3 and B-1, B-2, B-3, cover the unloading from railroad cars or barges, handling to the seasoning yard or to treating trams before treatment, moving them to boring, adzing and incising plant, <sup>boring</sup> adzing and incising cross ties and incising switch ties; moving to cylinders, treating them and loading them from trams to railroad cars; and further that prices quoted under paragraph C-1, C-2, C-3 and D-1, D-2, D-3, cover unloading material from railroad cars or barges and rafts, handling to seasoning yard or to trams, moving to treating cylinders,



and  
treating/loading from trains on to railroad cars. ~~That prices in Paragraphs A-2-B-2  
apply to treatment of both air-seasoned and artificially seasoned material.~~

The "actual treating hours" is considered to be the actual normal time occupied while the ties or other materials are in the cylinder in the process of treatment as shown by the treating records. Delays caused by failure of the Creosoting Company's equipment, low steam pressure, etc., shall be deducted when computing overtime charges.

Where material of the Railway Company is treated in the same charge with commercial material as provided for in Section XVIII, paragraphs C-1 and D-1, the Railway Company's stock of preservatives shall be charged with the calculated quantity required to treat its portion of the mixed load.

XX. The Creosoting Company agrees that, in case it, during the period of this agreement, makes contracts with other railroads directly or through their agents, for the treatment of forest products at prices lower than those scheduled in this agreement, then such lower prices shall become immediately effective in this contract.

XXI. The Railway Company will, on or before the thirtieth day of each month, pay to the Creosoting Company all sums owing to it at the end of the next preceding calendar month, upon proper bills, certified by the Railway Company's representative, rendered promptly by the Creosoting Company to the Railway Company.

XXII. In the event that either party hereto fails to carry out each and every obligation by it assumed under this contract, and such failure continues for a period of thirty (30) days, it is agreed that the aggrieved party may, at its option, cancel this agreement upon sixty (60) days' written notice. It is agreed that this cancellation provision cannot be invoked in any issue which can properly be made the subject of arbitration, and disposed of in accordance with the provisions of paragraph XVI hereof.

XXIII. This agreement shall be effective as of January 1, 1937, and unless terminated in accordance with the provisions of paragraph XXII, shall remain in force for a period of five (5) years and shall continue thereafter until cancelled by either party giving one (1) year's written notice to the other party. The effective date of cancellation shall be as of December 31st following the year's notice. The earliest date of the year's notice of cancellation shall be January 1st, 1941. It is understood and agreed, however, that any forest products on hand for treatment at the termination of this contract shall be carried to treatment completion under the provisions of this agreement.

XXIV. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal is hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY

By \_\_\_\_\_

WEST COAST PRESERVING COMPANY  
\_\_\_\_\_



EXHIBIT "A" ATTACHED AND A PART OF CONTRACT DATED \_\_\_\_\_ BETWEEN THE  
NORTHERN PACIFIC RAILWAY COMPANY AND THE WEST COAST WOOD PRESERVING COMPANY.

Specifications covering the seasoning and treatment of cross and switch ties, timber, lumber and piling.

Seasoning

1. Green ties, timber, lumber and piling will be delivered by the Railway Co. at the plant of the Creosoting Co. The Creosoting Co. will unload all material and pile same for storage and seasoning, using a spacing which local experience indicates is the most favorable for efficient seasoning. Material shall be stored on non-decaying sills and the ground must be kept free of weeds and vegetation or fungus growths which would be injurious to the timber.

2. Material shall be permitted to remain in the seasoning yard until the Railway Company representative considers it suitable for treatment. It is the intention to season material to a point where it can be successfully treated, without artificial seasoning, to obtain the desired penetration.

3. The Creosoting Co. shall save all car stakes, separators, etc., received with incoming material and make use of same for separators in seasoning, staking outgoing loads, etc.

Boring, Adzing and Incising

4. Before treatment all cross ties shall be bored for spikes, adzed for seating tie plates and incised by Greenlee Brothers or other approved machine. The incisions are to be not less than three quarters (3/4) of an inch in depth and so spaced as to permit a uniform distribution of the preservative to the depth of the incisions. The Railway Co. shall furnish plans showing the boring spacing required for the different <sup>Rail</sup> sections and also the dimensions of adzing areas.

5. Incising of switch ties, timber and lumber will be optional with the Railway Company.

Preservatives

6. The preservative for cross and switch ties shall be a 50-50 mixture of creosote and petroleum oil. The creosote shall conform to the American Railway Engineering Association specifications for Grade I Creosote Oil and be thoroughly mixed before using with California Crude Oil with an asphaltic base. For timber, lumber and piling the preservative shall be straight American Railway Engineering Association Grade I Creosote. The Railway Company may from time to time change the proportions of the mixture treatment or the specifications for Creosote and Oil.

Moisture Content

7. All material to be treated in any one charge must have approximately the same moisture content.

Material Sizes and Stripping

8. Material four inches or less in thickness must be treated separately from timbers of a greater thickness. Sufficient strips must be placed between tiers in any case where, in the judgment of the Inspector, stripping is necessary to afford free circulation of preservatives around each piece.

Artificial Seasoning

9. When material has not been air seasoned, it may be artificially seasoned, at the option of the Railway Co., in the treating cylinders by boiling under vacuum at temperatures ranging from 180° F. to a maximum of 200° F. as follows:

10. After the material is placed in the treating cylinder, preservative heated to about 160° F. shall be admitted until the material is completely immersed. A vacuum shall then be created and gradually raised until a minimum of 20 inches is



reached and this vacuum is to be maintained until the condensation passing off from the timber and accumulated in the hot well of the condenser does not exceed one-tenth of a pound per cubic foot of timber in charge per hour.

11. After the completion of the seasoning period, or bath, Paragraph 12, upon breaking the vacuum the preservative shall be immediately drained completely from the treating cylinder. This draining need not be done in case the water content of the preservative in the cylinder is not objectionable in the opinion of the inspector.

#### Preparatory Bath for Air Seasoned Material

12. All thoroughly air seasoned material must be held in a hot oil bath for a period of 2 to 8 hours at a temperature of about 180° F. in order to obtain the necessary absorption without the use of excessive pressure for a long period of time.

#### Treatment

13. Empty Cell Process without initial air pressure shall be used.

#### Injection of Preservative Under Pressure

14. Following the heating or the artificial seasoning period, the cylinder shall be filled with Preservative and pressure applied as required to a maximum of 160 pounds per square inch and maintained until the specified penetration or final absorption of preservative has been obtained. The maximum pressure in the case of cross and switch ties shall be 150 pounds per square inch. The temperature of the preservative during the pressure period shall be as high as possible, with a minimum limit of 160° F. and a maximum of 200° F.

15. After pressure is completed the cylinders shall be emptied of preservatives and a vacuum of at least 25 inches of mercury promptly created and maintained for a sufficient period of time to free the material of dripping preservative.

#### Penetration Cross and Switch Ties and Piling

16. The minimum penetration of preservative shall be 3/4 of an inch. Representative ties from each charge must be tested for penetration, and at least 75% of the ties so tested must show the above specified minimum. In determining penetration, light discoloration of the wood from treatment shall not be considered.

The minimum penetration on every pile shall be not less than one inch of black oil.

#### Penetration Timber and Lumber

17. The average depths of penetration for the specified amount of preservative shall be as follows:

Size	12#	14#	16#
3"x12" & 4"x12"	--	--	.50 inch
6"x12"	.50 inch	.55 inch	.65 inch
12"x12" & larger	.75 inch	.85 inch	1.00 inch

The penetration must be based on black oil. Representative pieces from each charge must be tested for penetration and at least 75% of these pieces so tested must show the above specified minimum.

#### Penetration and Final Retention - General

18. The penetration rather than the final retention of preservative shall govern as to the acceptance of treatment. The preservative finally retained by cross and switch ties shall be as nearly as possible 7 pounds per cubic foot of timber. For piles the retention ~~shall~~ to be similarly 16 pounds per cubic foot of timber. For timber and lumber this **penetration** is likewise outlined in paragraph 17. The treating plant shall be provided with the necessary gauges, measuring devices and appliances required to observe and record the gross and final retention of preservative in order that the Railway Company may be assured of obtaining the minimum



specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

#### Retreatment

20. In case unsatisfactory penetration or final retention of preservative should warrant retreatment or continuation of treatment of segregated material or the entire charge, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

#### Damaged Material

21. Material damaged through improper treatment or handling by the Creosoting Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

#### General Conditions

22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

23. All holes bored for test purposes must be plugged with creosoted plugs furnished by the Creosoting Co.

24. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

25. The Creosoting Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.



specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

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26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.

specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

#### Retreatment

20. If the penetration or the final retention of preservative should be found unsatisfactory, retreatment or continuation of treatment may be required. In case the unsatisfactory condition is due to the fault of the Creosoting Company's equipment or methods, the extra cost of treatment shall be at the expense of the Creosoting Co. In case segregated material or the entire charge is returned to the cylinder for additional treatment, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

#### Damaged Material

21. Material damaged through improper treatment or handling by the Creosoting Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

#### General Conditions

22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

23. All holes bored for test purposes must be plugged with creosoted plugs furnished by the Creosoting Co.

24. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

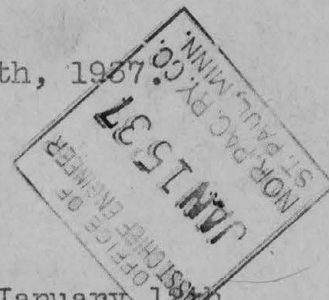
25. The Creosoting Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.



Brainerd, Minn., Jan. 14th, 1937



Mr. L. Yager:

In compliance with your letter of January 13th, I have checked over the last draft of the Seattle contract.

The discrepancies I find are in my estimation not of enough consequence to delay approval by Mr. Horrocks or otherwise result in any misunderstanding to the present parties immediately concerned, but for the sake of accuracy and to avoid any possible misinterpretation by others, I believe corrections should be made as follows:

✓ In paragraph "3" the word "desires" should be used instead of "desired".

J ✓ In paragraph "12" the word "sufficient" should be used instead of "sufficiently". Meaning "if a sufficient number of properly seasoned ties are available".

✓ In paragraph "19" at the top of page "6" the word "and" has been omitted between the words "treating" and "loading". To avoid confliction with the new price schedule I believe the last sentence in this paragraph should be omitted.

✓ In specification "4" of Exhibit "A" the word rail is omitted between the words "different" and "sections" in the last line.

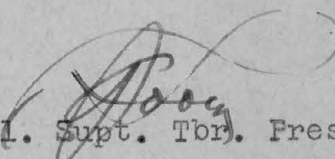
✓ In specification "6" of Exhibit "A" I believe it would be best to say (45-55) instead of 50-50 mixture. Although provision is made for any change in the proportions, a 45-55 mixture has been agreed upon and we no longer use a 50-50 mixture.

J ✓ In specification "20" of Exhibit "A" under "Retreatment". This paragraph should be rewritten to avoid confliction with provisions of paragraphs A-1, A-2, A-3, B-1, B-2, B-3, B-4 and C-1, of the new contract price schedule as agreed upon by the contractor.

I would substitute the following:

Retreatment

20. In case unsatisfactory penetration or final retention of preservative should warrant retreatment or continuation of treatment of segregated material or the entire charge, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

  
Gen'l. Supt. Tbr. Preservation.



St. Paul, Minnesota  
January 12, 1937.

Mr. A. J. Loom:

I am attaching a copy of my letter to Mr. Horrocks today transmitting the final draft of contract for his approval, and I am likewise attaching a copy of the last draft which I wish you would, at your early convenience, check over critically with the previous draft, and likewise call attention to any errors or omissions which may have crept in. I ask you to do this because you are more familiar than anyone else with the discussions and agreements we arrived at in our conferences with Mr. Horrocks and his associates.

L. YAGER.

encl.

January 12, 1937.

Mr. H. E. Horrocks, Manager  
West Coast Wood Preserving Co.  
1118 - 4th Avenue at Seneca Street  
Seattle, Washington

Dear Mr. Horrocks:

We have finally completed the various investigations required by our executives in connection with the proposal to continue arrangements with your company for contract treatment of forest products. I am handing you herewith the original and duplicate copies of the draft of contract for execution on the part of your company.

For the purpose of assisting you in checking the final draft I am offering the following comments which compare the final draft with the tentative draft under date of September 21, 1936 of which you received a copy as expressing our understanding following conferences in Seattle and subsequent exchange of letters.

Articles IV and V have been reversed in position.

In Article XII the period has been changed "during the months November to March inclusive" in place of "August to December 31st of each year". This is more in line with the actual practice of the past and probable requirements of the future.

Article XVI covering arbitration has been re-drafted by our Legal Department. I do not believe that you will find it necessary to take any exceptions to the changes.

The Legal Department added Article XXII which of course makes it necessary to make a slight revision in the following article which is, namely, XXIII.

All the changes to which I have called attention were made to comply with the suggestions of our Legal Department for the purpose of clarifying certain points. Will you kindly check the final draft, and if you have no corrections in mind, arrange for as prompt execution as possible on the part of your company and return both copies to me for execution by the proper officers of the Northern Pacific?

Thanking you for the patience which you have exhibited all along in bringing this matter to a conclusion, and wishing you success and prosperity in the New Year, I am,

Yours very truly,

L. YAGER.

encl.

(Copy sent A. J. Loom 1/12/37)



January 11, 1937

Mr. H. E. Horrocks  
Manager -  
West Coast Wood Preserving Co.  
1118 - 4th Avenue at Seneca Street  
Seattle, Washington

Dear Mr. Horrocks:

I have just returned to the office  
this morning from an absence of five days and  
find your letter of January 6th.

The draft of the contract with which  
we have been dealing for these past few months  
just came to me this morning.

I shall endeavor to review it again  
and transmit it to you tomorrow.

Yours very truly,

L. YAGER.

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CONTRACT made this \_\_\_\_\_ day of \_\_\_\_\_, A. D. 1936, between the NORTHERN PACIFIC RAILWAY COMPANY, a Wisconsin corporation hereinafter called the "Railway Company", and the WEST COAST WOOD PRESERVING COMPANY, a Washington corporation hereinafter called the "Creosoting Company".

In consideration of the mutual dependent promises stated in this contract the parties agree:

I. The Creosoting Company shall store for seasoning and treat at its plant located in the City of Seattle, Washington, such forest products as may be offered by the Railway Company from time to time in accordance with specifications in Exhibit "A" attached and made part of this contract. The term "forest products" used herein is inclusive of cross ties, bridge ties and switch ties, timber, lumber, piling, and poles. It is understood and agreed that: (a) The Railway Company reserves the right to treat any portion or all of the forest products used by it in the territory tributary to the Creosoting Company's Seattle plant, in any one or more of the Railway Company's presently owned and individually operated treating plants. (b) The Railway Company shall offer to the Creosoting Company for treatment under the terms of this contract all forest products not reserved under the provisions of the foregoing paragraph (a).

II. The Creosoting Company agrees that its plant shall be maintained during the term of this agreement in such degree of working efficiency that the capacity of the plant shall be adequate at all times to treat the yearly requirements of the Railway Company.

III. The Railway Company will notify the Creosoting Company in writing prior to the first of October of each year of the approximate number of cross ties and other forest products which it desired to have stored for seasoning and subsequent treatment during the following calendar year.

IV. The forest products to be furnished hereunder shall be delivered on cars at the plant of the Creosoting Company. The Creosoting Company shall promptly unload cars and stack the material in the storage yard of the plant for seasoning. The Railway Company in making deliveries to the Creosoting Company shall have regard to its capacity for receiving and stacking material. The Creosoting Company shall pay the Railway Company compensation for any delays in unloading said cars in accordance with the rates set up in the Railway Company's published demurrage tariffs whenever eight (8) or less cars are delivered per day. Whenever more than eight (8) cars per day shall be delivered the expense incident to the detention of cars for unloading shall be assumed by the Railway Company. The Creosoting Company will accept delivery of forest products on scows or in rafts alongside its plant under the same conditions as outlined for delivery on cars, except that the Creosoting Company will not be required to pay the Railway Company for delays in unloading such scows or rafts.

V. The Railway Company will furnish open cars, in so far as may be possible, for delivery of untreated material and for shipment of treated material. The Railway Company at its own cost and expense will do all required switching of its cars of forest products billed to and from the plant. The Creosoting Company agrees to make requests for only such switching as is reasonably necessary and such switching shall be done so far as is practicable at times most convenient to the Railway Company between the hours of 7:00 A. M. and 6:00 P. M.

VI. All cross ties shall be properly segregated by grades on cars by the Railway Company to facilitate stacking for seasoning and subsequent treatment by grades. Switch ties, timber and piling delivered shall be sorted by the Creosoting Company at its own expense, for its convenience in handling for treatment.

VII. All treated material shall be loaded and billed as directed by the Railway Company. Cross ties will be loaded by grades and rail borings. Switch ties will be loaded by lengths.

The Railway Company shall furnish promptly all cars required to ship out treated material. The Creosoting Company agrees to give the Railway Company at least five days' notice as to the time such cars are required.



VIII. The Creosoting Company shall provide fire protection for seasoning and storage yard satisfactory to the Railway Company.

The forest products shall remain the property of the Railway Company and be insured by it against loss by fire.

IX. The Creosoting Company agrees to count and tally material received in each car as soon as possible after receipt of car at its plant, either before or immediately after unloading, against invoice or inspection reports furnished by the Railway Company and to mail reports of such tally to the Railway Company's representative immediately after each invoice or inspection report has been tallied.

The Creosoting Company agrees that, as far as practicable, it shall have painted on each stack the initial, number, and out turn of each car from which material is unloaded, and the date of unloading.

The Creosoting Company agrees to return to the Railway Company the identical material shipped to it by the Railway Company after said material has been treated, and in case there should be any shortage whatever, the Creosoting Company agrees to pay the Railway Company therefor at the market price at Seattle, Washington, of like material at the time the shortage is discovered; provided, however, that the Creosoting Company shall not be responsible for shortage resulting from fire or causes which are clearly beyond its control. Joint inventories of all forest products shall be taken at least every six months, and discrepancies found adjusted at that time.

The Creosoting Company agrees to furnish reports of all material delivered, shipped, used, and on hand at regularly stated intervals as may be required by the Store Department or the Insurance Department of the Railway Company.

X. The Railway Company will furnish all creosote and petroleum oil required to treat its material under this agreement. The Creosoting Company agrees to unload and store all creosote and petroleum oil furnished by the Railway Company in railroad tank cars at the plant. The Creosoting Company agrees to set aside a storage tank with a capacity of 300,000 gallons for creosote furnished by the Railway Company. Creosote furnished by the Railway Company from vessels or barges shall be delivered into the storage tank without expense to the Creosoting Company. Should the Railway Company elect to permit the Creosoting Company to purchase creosote and oil for it, the prices to be paid and the quantities to be purchased for its account must be approved by the Railway Company, and the material must conform to the current specifications of the Railway Company to be kept on file with the Creosoting Company. The Railway Company shall carry the insurance and pay the taxes on creosote and oil stored for it by the Creosoting Company, and agrees to pay promptly all invoices covering creosote and oil purchased with its authority for its account.

XI. The Creosoting Company agrees to provide storage tanks of suitable capacity to store the preservatives required for treating the material of the Railway Company, together with working tanks and proper gauges to insure accurate and satisfactory measurements of creosote and oil used in the treatment of the different classes of material for the Railway Company.

The Creosoting Company may, with the written consent of the Railway Company first had and obtained, use the preservatives belonging to the Railway Company for the purpose of treating forest products for other concerns in the same plant, and the Creosoting Company shall thereupon promptly replace preservatives so used with other preservatives meeting the specifications of the Railway Company and shall permit no delays in the treatment of Railway Company material to result from such use. In case the Creosoting Company shall be permitted such use of Railway Company preservatives, then joint inventories of preservatives shall be made at the end of each month or at any other appropriate time for the purpose of adjusting surplus or deficits. Any surplus or deficit must be pro-rated on the relative final retentions of preservatives for the different classes of material treated for the parties concerned.



*Supplement*

XII. The Railway Company desires to have its cross ties treated during the months November to March, inclusive. The Creosoting Company agrees to use reasonable efforts with due regard to the business offered by other customers and the treating capacity of its plant to treat the yearly requirements in this interval if sufficiently properly seasoned ties are available. If for any reason the Creosoting Company at any time cannot with reasonable effort carry out the aforementioned preferential arrangement, the Railway Company agrees to have delivered green ties in advance of requirements so that sufficient seasoned ties will be available for treatment at approximately uniform monthly rates for the yearly requirements.

XIII. The Creosoting Company agrees to store treated ties in its storage yard up to the convenient capacity for temporary storage at the request of the Railway Company. The storage and extra handling involved in loading into cars shall be compensated for at a price scheduled in this agreement.

XIV. The Creosoting Company agrees that upon the written request of the Railway Company to do so, it will accept any modification, changes or substitutions in the specifications in Exhibit "A" hereinbefore mentioned, provided such modifications, changes, or substitutions will not require the purchase of any additional equipment, or increase the cost to the Creosoting Company or lessen the plant capacity.

The Railway Company agrees that in the event a change of process is made, at its request, it will reimburse the Creosoting Company for any royalty the Creosoting Company may be required to pay in consequence, thereof, and will also protect the Creosoting Company against all claims pertaining thereto.

XV. The Railway Company, through its designated representatives or agents, shall have access at all reasonable times to the plant and premises of the Creosoting Company and the right to inspect all operations therein, and shall be furnished all necessary and proper facilities for testing the preservatives employed and the amount absorbed by each charge of ties and other material treated for the Railway Company.

The Creosoting Company shall furnish records on forms furnished by the Railway Company of all treating operations to correspond to that which the Railway Company keeps at its own treating plants.

XVI. Should the parties disagree upon any question as to the true construction of any provision in this contract or concerning any violation of any such provision, such question shall be submitted to the arbitrament of three (3) disinterested persons familiar with such business. The party demanding such arbitration shall give to the other party notice of such demand, stating specifically the question to be submitted for decision and nominating a person who has the required qualifications to act as one arbitrator. If at the expiration of thirty (30) days from the receipt of such notice the party receiving it has not notified the party demanding the arbitration of its nomination of a second arbitrator having like qualifications, the party demanding such arbitration may apply, on thirty (30) days' notice to the other party, to a judge of any court of the United States for the appointment of a second arbitrator. Should the party to whom notice of arbitration is given not have appointed such arbitrator before the application shall come on for hearing before such judge, such second arbitrator shall be appointed by such judge, and shall thereupon be deemed an arbitrator within this section as if appointed by the party to whom such notice was given. The two arbitrators so appointed as aforesaid shall select a third arbitrator, and the three arbitrators so appointed shall constitute a Board of Arbitrators. In the event of the two arbitrators being unable to agree upon such third arbitrator, either party upon five (5) days' notice to the other may apply to a judge as aforesaid for the appointment of such third arbitrator, and when so appointed, such three arbitrators shall constitute the Board as aforesaid.

The third arbitrator shall have power to fix the time and place when and at which the arbitration shall proceed, but, in doing so, shall give due consideration to the reasonable convenience of the parties and their witnesses.

Upon such Board of Arbitration being completed, it shall proceed with reasonable diligence to inquire into the questions at issue as disclosed in such notice, and may take such evidence as it may deem reasonable or as either party may submit, without requiring witnesses to be sworn, and may hear argument of counsel or others. After the parties have been heard, it shall proceed to make its award in



writing, and the same, when signed by two or more of the arbitrators, shall be final, binding and conclusive upon the parties.

The books and papers of both or all the parties, so far as they relate to any matter submitted to arbitration, shall be open to the examination of the arbitrators.

Until the arbitrators shall make their award upon any question submitted to them, the business to be done and the settlements and payments to be made under the terms of this agreement shall continue to be done and made in the manner and form existing prior to the arising of such question.

Each party shall pay for the services and expenses incurred by arbitrator chosen by or for it and both parties shall jointly and equally pay for the services and expenses of the single or third arbitrator, together with all other and different expenses of the arbitration.

XVII. If at any time during the term of this agreement the operation of the Creosoting Company's plant shall be temporarily suspended because of fire, explosion, strikes, or other causes not within its control, the time during which the operation of this plant shall be suspended shall not be counted as a part of the term of this agreement, and a corresponding additional time shall be given it for performing its obligations under this agreement; provided, however, in case of the total or partial destruction of the said plant by fire or other cause the Creosoting Company shall promptly repair, rebuild and restore the same to substantially the same condition in which it was before such total or partial destruction and pending such reconstruction the Railway Company may remove its ties and other material from the seasoning yard for use untreated or if desired for treatment at its own or some other commercial plant.

XVIII. The Railway Company agrees to pay to the Creosoting Company for work performed and services rendered, as specified in this agreement, the following prices:

A-1	For the treatment of all seasoned cross ties, per thousand feet board measure .....	\$ 6.25
A-2	For treatment of unseasoned cross ties taken direct from incoming railroad cars, per thousand feet board measure .....	\$ 6.25
A-3	For treatment of unseasoned cross ties taken from stock piles in seasoning yard, per thousand feet board measure .....	\$ 8.70
B-1	For the treatment of all seasoned switch ties, per thousand feet board measure .....	\$ 8.00
B-2	For the treatment of unseasoned switch ties taken direct from incoming railroad cars, per thousand feet board measure .....	\$ 8.00
B-3	For the treatment of unseasoned switch ties taken from stock piles in seasoning yard, per thousand feet board measure .....	\$ 8.60
B-4	For the treatment of bridge ties in cylinder capacity lots the conditions and prices of B-1, B-2, and B-3 shall apply. For the treatment of bridge ties in less than cylinder capacity lots, the conditions and prices of C-1, C-2, and C-3 shall apply.	
C-1	For the treatment of all sawed material other than cross ties and switch ties in cylinder charges of 30,000 feet board measure or less (the treating company being given the option of treating such charges separately or mixed with commercial material) per thousand feet board measure .....	\$ 12.80
C-2	For the treatment of all sawed material other than cross ties and switch ties in cylinder charges in excess of 30,000 feet board measure which require a time duration of not longer than twelve (12) actual treating hours, per thousand feet board measure .....	\$ 10.80



- C-3 For the time in excess of twelve (12) actual treating hours required for treating material covered by paragraph C-2, per cylinder per hour or fraction thereof ..... \$ 5.10
- D-1 For the treatment of all piling, poles, and other similar material which requires a time duration not longer than twelve (12) actual treating hours, the Creosoting Company being given the option of treating quantities of less than a full cylinder charge either separately or combined with commercial material, per cubic foot ... \$ 0.14
- D-2 For time in excess of twelve (12) actual treating hours required for treating material covered by paragraph D-1, with the understanding that where material is treated in the same charge with commercial material the time over twelve (12) actual hours will be pro-rated between the Railway and commercial material in the proportion that the volume of the material of each bears to the total volume in the charge, per cylinder per hour or fraction thereof ..... \$ 5.10
- D-3 The prices quoted in paragraphs D-1 and D-2 are predicated on the Railway Company having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment the Railway Company shall have the option of purchasing untreated piles at mutually agreeable prices from the stock of the Creosoting Company, or purchasing treated piles which meet the Railway Company's requirements from the Creosoting Company at its current commercial price.
- E-1 In cases where it is found, on account of unseasoned conditions of material, or other conditions not the responsibility of the Creosoting Company, an unsatisfactory treatment has been obtained and the Railway Company's inspector considers it advisable to segregate and re-treat all or any portion of cylinder charge of piles, it shall be done at the following rate for each re-treatment in addition to the prices mentioned in paragraphs D-1 and D-2:  
(a) Two cents (\$.02) per cubic foot for piling, poles, and other similar material retreated. It is understood that entire cylinder charges returned for continuation of treatment without segregation of any part of the material shall not be considered as coming under the provisions of this E-1.
- E-2 For storage of treated cross ties after treatment and subsequent loading on cars, in addition to prices A-1, A-2, A-3, per tie ..... \$ 0.01
- E-3 For storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with the Railway Company's instructions for shipment, in addition to prices B-1, B-2, and B-3, per thousand feet board measure ..... \$ 0.60
- E-4 For incising sawed material other than cross ties and switch ties including all handling not included under paragraphs C-1, C-2, C-3, necessary to accomplish it, per thousand feet board measure ..... \$ 0.50
- E-5 For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus ten (10) per cent to cover supervision and profit.

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XIX. It is understood and agreed that the prices quoted under Section XVIII, Paragraphs A-1, A-2, A-3 and B-1, B-2, B-3, cover the unloading from railroad cars or barges, handling to the seasoning yard or to treating trams before treatment, moving them to boring, edging and incising plant, <sup>boring</sup> edging and incising cross ties and incising switch ties; moving to cylinders, treating them and loading them from trams to railroad cars; and further that prices quoted under paragraph C-1, C-2, C-3 and D-1, D-2, D-3, cover unloading material from railroad cars or barges and rafts, handling to seasoning yard or to trams, moving to treating cylinders,



treating loading from trams on to railroad cars. The prices in Paragraphs A-B-C-D apply to treatment of both air-seasoned and artificially seasoned material.

The "actual treating hours" is considered to be the actual normal time occupied while the ties or other materials are in the cylinder in the process of treatment as shown by the treating records. Delays caused by failure of the Creosoting Company's equipment, low steam pressure, etc., shall be deducted when computing overtime charges.

Where material of the Railway Company is treated in the same charge with commercial material as provided for in Section XVIII, paragraphs C-1 and D-1, the Railway Company's stock of preservatives shall be charged with the calculated quantity required to treat its portion of the mixed load.

XX. The Creosoting Company agrees that, in case it, during the period of this agreement, makes contracts with other railroads directly or through their agents, for the treatment of forest products at prices lower than those scheduled in this agreement, then such lower prices shall become immediately effective in this contract.

XXI. The Railway Company will, on or before the thirtieth day of each month, pay to the Creosoting Company all sums owing to it at the end of the next preceding calendar month, upon proper bills, certified by the Railway Company's representative, rendered promptly by the Creosoting Company to the Railway Company.

XXII. In the event that either party hereto fails to carry out each and every obligation by it assumed under this contract, and such failure continues for a period of thirty (30) days, it is agreed that the aggrieved party may, at its option, cancel this agreement upon sixty (60) days' written notice. It is agreed that this cancellation provision cannot be invoked in any issue which can properly be made the subject of arbitration, and disposed of in accordance with the provisions of paragraph XVI hereof.

XXIII. This agreement shall be effective as of January 1, 1937, and unless terminated in accordance with the provisions of paragraph XXII, shall remain in force for a period of five (5) years and shall continue thereafter until cancelled by either party giving one (1) year's written notice to the other party. The effective date of cancellation shall be as of December 31st following the year's notice. The earliest date of the year's notice of cancellation shall be January 1st, 1941. It is understood and agreed, however, that any forest products on hand for treatment at the termination of this contract shall be carried to treatment completion under the provisions of this agreement.

XXIV. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal is hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY

By \_\_\_\_\_

WEST COAST PRESERVING COMPANY

\_\_\_\_\_



EXHIBIT "A" ATTACHED AND A PART OF CONTRACT DATED \_\_\_\_\_ BETWEEN THE  
NORTHERN PACIFIC RAILWAY COMPANY AND THE WEST COAST WOOD PRESERVING COMPANY.

Specifications covering the seasoning and treatment of cross and switch ties, timber, lumber and piling.

Seasoning

1. Green ties, timber, lumber and piling will be delivered by the Railway Co. at the plant of the Creosoting Co. The Creosoting Co. will unload all material and pile same for storage and seasoning, using a spacing which local experience indicates is the most favorable for efficient seasoning. Material shall be stored on non-decaying sills and the ground must be kept free of weeds and vegetation or fungus growths which would be injurious to the timber.

2. Material shall be permitted to remain in the seasoning yard until the Railway Company representative considers it suitable for treatment. It is the intention to season material to a point where it can be successfully treated, without artificial seasoning, to obtain the desired penetration.

3. The Creosoting Co. shall save all car stakes, separators, etc., received with incoming material and make use of same for separators in seasoning, staking outgoing loads, etc.

Boring, Adzing and Incising

4. Before treatment all cross ties shall be bored for spikes, adzed for seating tie plates and incised by Greenlee Brothers or other approved machine. The incisions are to be not less than three quarters (3/4) of an inch in depth and so spaced as to permit a uniform distribution of the preservative to the depth of the incisions. The Railway Co. shall furnish plans showing the boring spacing required for the different sections and also the dimensions of adzing areas.

5. Incising of switch ties, timber and lumber will be optional with the Railway Company.

Preservatives

6. The preservative for cross and switch ties shall be a 50-50 mixture of creosote and petroleum oil. The creosote shall conform to the American Railway Engineering Association specifications for Grade I Creosote Oil and be thoroughly mixed before using with California Crude Oil with an asphaltic base. For timber, lumber and piling the preservative shall be straight American Railway Engineering Association Grade I Creosote. The Railway Company may from time to time change the proportions of the mixture treatment or the specifications for Creosote and Oil.

Moisture Content

7. All material to be treated in any one charge must have approximately the same moisture content.

Material Sizes and Stripping

8. Material four inches or less in thickness must be treated separately from timbers of a greater thickness. Sufficient strips must be placed between tiers in any case where, in the judgment of the Inspector, stripping is necessary to afford free circulation of preservatives around each piece.

Artificial Seasoning

9. When material has not been air seasoned, it may be artificially seasoned, at the option of the Railway Co., in the treating cylinders by boiling under vacuum at temperatures ranging from 180° F. to a maximum of 200° F. as follows:

10. After the material is placed in the treating cylinder, preservative heated to about 160° F. shall be admitted until the material is completely immersed. A vacuum shall then be created and gradually raised until a minimum of 20 inches is



reached and this vacuum is to be maintained until the condensation passing off from the timber and accumulated in the hot well of the condenser does not exceed one-tenth of a pound per cubic foot of timber in charge per hour.

11. After the completion of the seasoning period, or bath, Paragraph 12, upon breaking the vacuum the preservative shall be immediately drained completely from the treating cylinder. This draining need not be done in case the water content of the preservative in the cylinder is not objectionable in the opinion of the inspector.

#### Preparatory Bath for Air Seasoned Material

12. All thoroughly air seasoned material must be held in a hot oil bath for a period of 2 to 8 hours at a temperature of about 180° F. in order to obtain the necessary absorption without the use of excessive pressure for a long period of time.

#### Treatment

13. Empty Cell Process without initial air pressure shall be used.

#### Injection of Preservative Under Pressure

14. Following the heating or the artificial seasoning period, the cylinder shall be filled with Preservative and pressure applied as required to a maximum of 160 pounds per square inch and maintained until the specified penetration or final absorption of preservative has been obtained. The maximum pressure in the case of cross and switch ties shall be 150 pounds per square inch. The temperature of the preservative during the pressure period shall be as high as possible, with a minimum limit of 160° F. and a maximum of 200° F.

15. After pressure is completed the cylinders shall be emptied of preservatives and a vacuum of at least 25 inches of mercury promptly created and maintained for a sufficient period of time to free the material of dripping preservative.

#### Penetration Cross and Switch Ties and Piling

16. The minimum penetration of preservative shall be 3/4 of an inch. Representative ties from each charge must be tested for penetration, and at least 75% of the ties so tested must show the above specified minimum. In determining penetration, light discoloration of the wood from treatment shall not be considered.

The minimum penetration on every pile shall be not less than one inch of black oil.

#### Penetration Timber and Lumber

17. The average depths of penetration for the specified amount of preservative shall be as follows:

Size	12#	14#	16#
3"x12" & 4"x12"	--	--	.50 inch
6"x12"	.50 inch	.55 inch	.65 inch
12"x12" & larger	.75 inch	.85 inch	1.00 inch

The penetration must be based on black oil. Representative pieces from each charge must be tested for penetration and at least 75% of these pieces so tested must show the above specified minimum.

#### Penetration and Final Retention - General

18. The penetration rather than the final retention of preservative shall govern as to the acceptance of treatment. The preservative finally retained by cross and switch ties shall be as nearly as possible 7 pounds per cubic foot of timber. For piles the retention ~~shall~~ to be similarly 16 pounds per cubic foot of timber. For timber and lumber this penetration is likewise outlined in paragraph 17. The treating plant shall be provided with the necessary gauges, measuring devices and appliances required to observe and record the gross and final retention of preservative in order that the Railway Company may be assured of obtaining the minimum

specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

#### Retreatment

20. If the penetration or the final retention of preservative should be found unsatisfactory, retreatment or continuation of treatment may be required. In case the unsatisfactory condition is due to the fault of the Creosoting Company's equipment or methods, the extra cost of treatment shall be at the expense of the Creosoting Co. In case segregated material or the entire charge is returned to the cylinder for additional treatment, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

#### Damaged Material

21. Material damaged through improper treatment or handling by the Creosoting Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

#### General Conditions

22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

23. All holes bored for test purposes must be plugged with creosoted plugs furnished by the Creosoting Co.

24. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

25. The Creosoting Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.



Saint Paul, January 11th, 1936



MR. L. YAGER:

Referring to your letter of September 25th, with which you transmitted form of contract with the WEST COAST WOOD PRESERVING COMPANY superseding the contract of November 4, 1926 with the J. M. COLMAN COMPANY:

You may submit the agreement to the Wood Preserving Company for execution.

I notice on page 2 the omission of the word "tank". It might be well to be sure that no other correction is necessary.

BB:s

*Demad Dhu*  
*12/17*

L. J. COLMAN  
PRESIDENT

L. C. HENRY  
VICE - PRESIDENT

A. D. BARRALL  
SECRETARY - TREASURER

H. E. HORROCKS  
MANAGER

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.

January 9, 1937

CABLE ADDRESS  
"CREOSOTE"

Mr. L. Yager, Chief Engineer  
Northern Pacific Railway  
St. Paul, Minnesota

Dear Mr. Yager:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.  
TERMS: NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.  
INSPECTION AND/OR ACCEPTANCE OF MATERIAL AT OUR PLANTS IS TO BE FINAL.

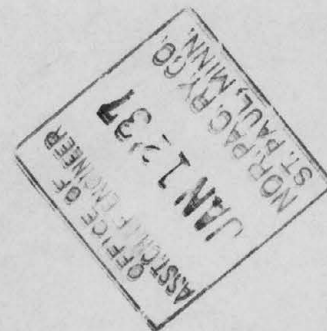
I wish to make a correction in my letter of January 6 in which I stated that in arriving at the status of the present contract we used a board measure equivalent to three million 7x8"-8' ties.

I was in error in this and of course not in conformity with the terms of the contract. As a matter of fact, the status of completion is as I wrote you, but in arriving at that we have adhered strictly to the letter of the contract in so far not only as number of ties is concerned, but converting other materials into ties at the rate of 42'BM per tie.

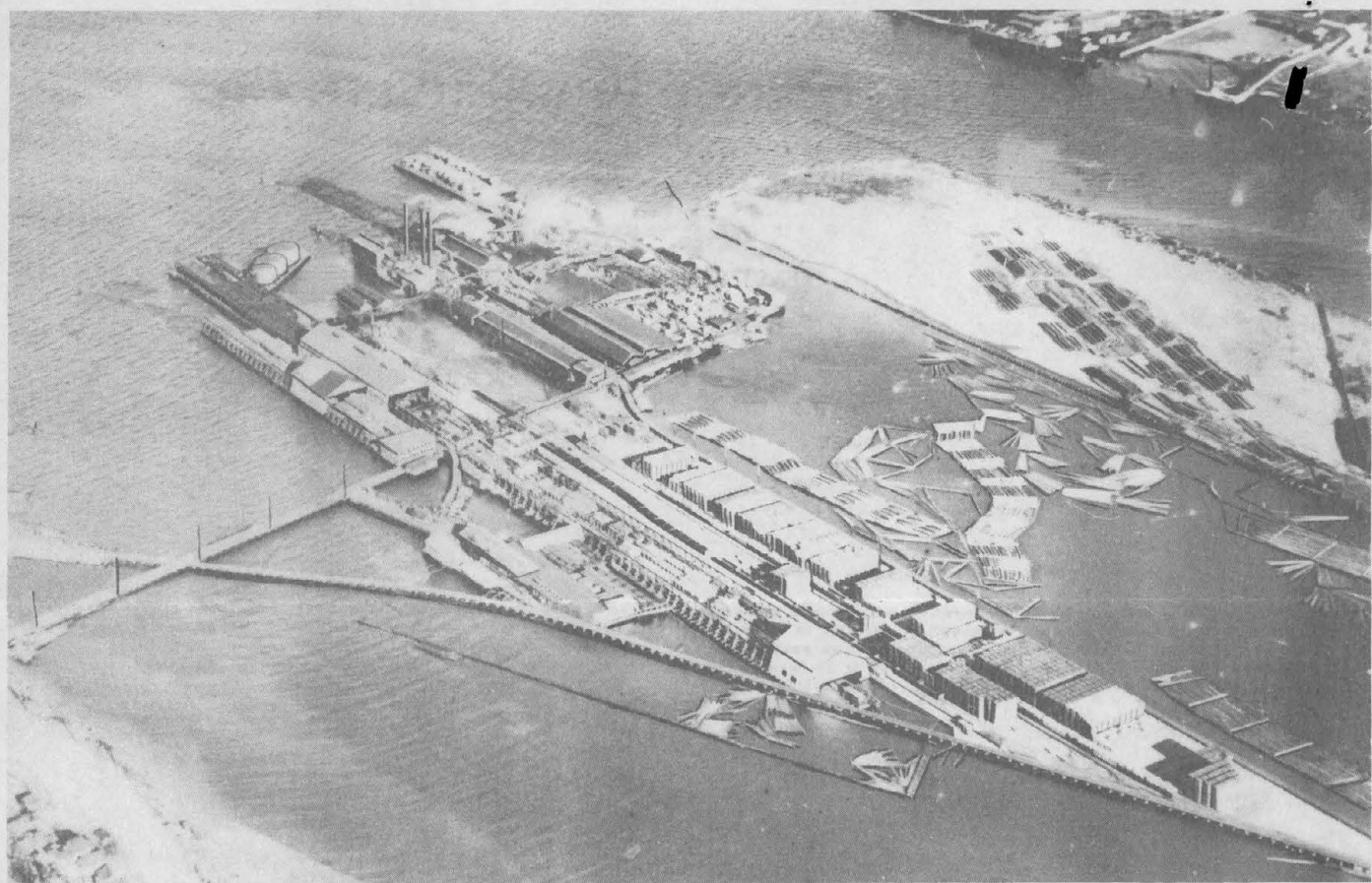
Yours very truly,

*H. E. Horrocks*  
Manager

HEH:I  
*1/11/37*







AERIAL VIEW OF MANUFACTURING PLANTS



L. J. COLMAN  
PRESIDENT

L. C. HENRY  
VICE - PRESIDENT

A. D. BARRALL  
SECRETARY - TREASURER

H. E. HORROCKS  
MANAGER

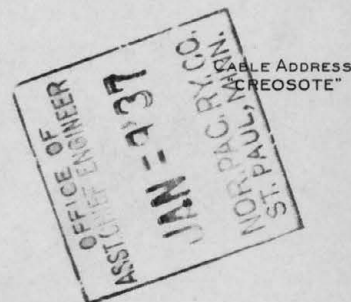
# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.  
January 6, 1937



Mr. L. Yager, Chief Engineer  
Northern Pacific Railway  
St. Paul, Minnesota

Dear Mr. Yager:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.  
**TERMS:** NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.  
INSPECTION AND/OR ACCEPTANCE OF MATERIAL AT OUR PLANTS IS TO BE FINAL.

Just a note to bring to your attention that after checking with the representatives of your company located at our Seattle plant, we find that the total quantities of treated material covered by our contract with your company, i.e., board measure equivalent to three million pieces of 7x8"-8' ties, had been completed with the treatment of our charge #N-65, processed on December 31, 1936. In fact your representative and our plant operators agree that this charge contained 127 pieces of ties over and above finishing the contract.

Our record shows that we now have on our yard a total of 302,346 cross ties of various classes, after completion of the expired contract. We presume it is your intention to have us continue treating ties but, of course, as yet have no contract to evidence that intention. The new contract when finally executed by your company, will carry a price somewhat less than the price under the expired contract.

Yours very truly,

WEST COAST WOOD PRESERVING CO.

By

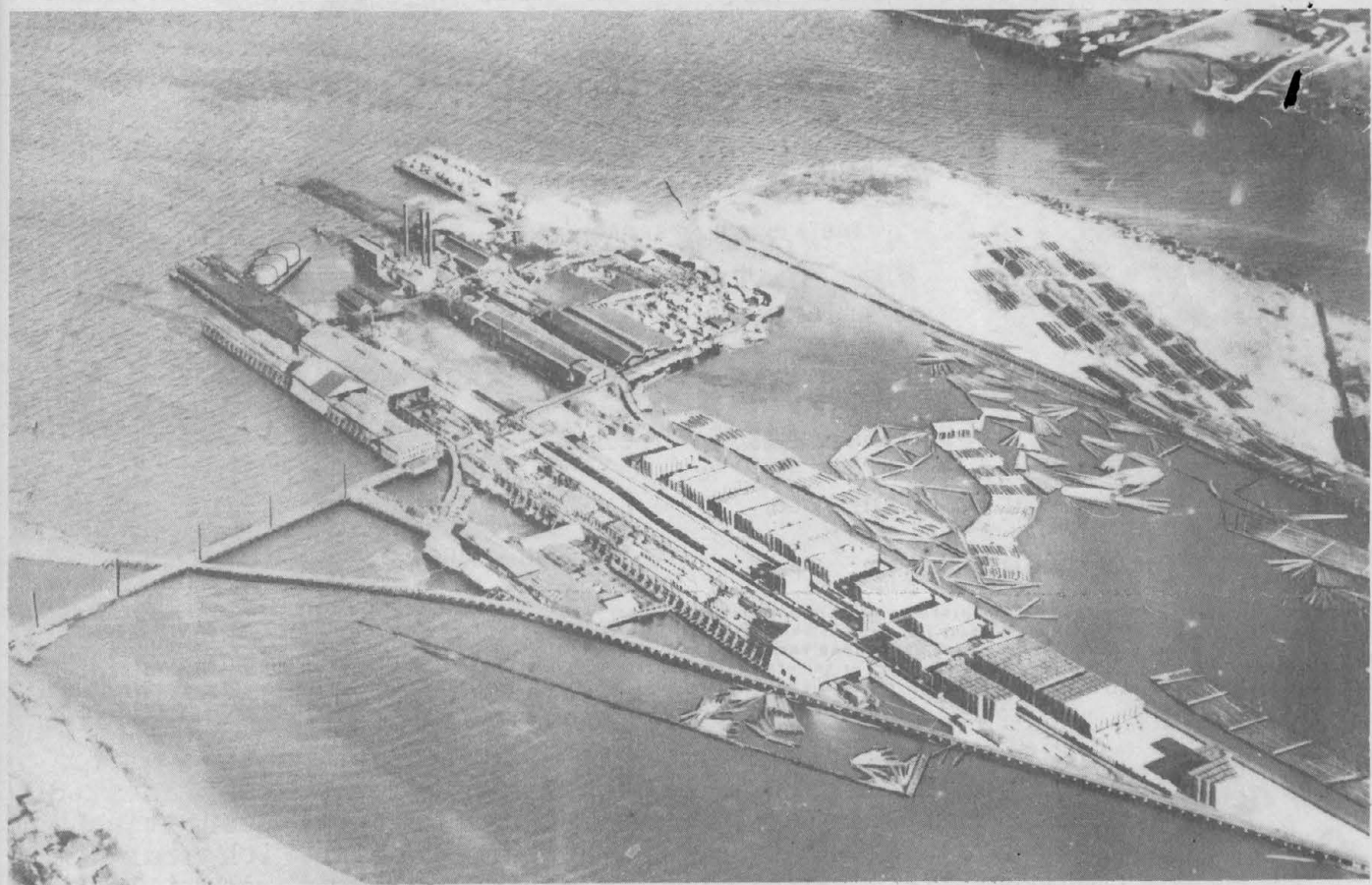
Manager

HEH:I

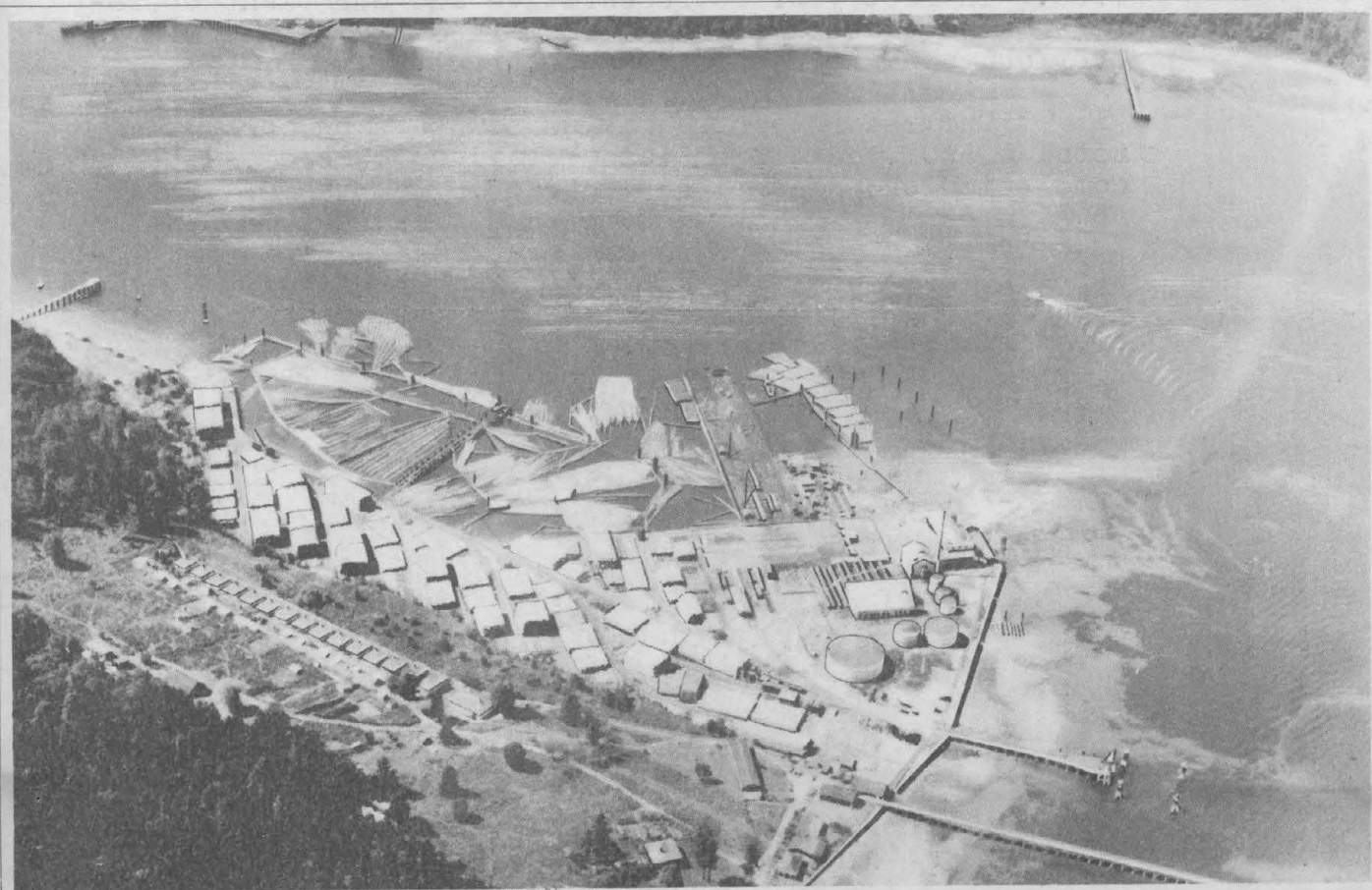
*Note by  
Mr. Blume*

*Mr. Blume*  
*To note. af. 11/11/37*

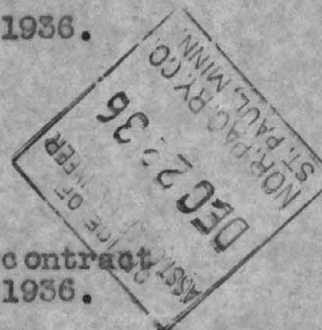




AERIAL VIEW OF MANUFACTURING PLANTS



Brainerd, Minn., December 21st, 1936.



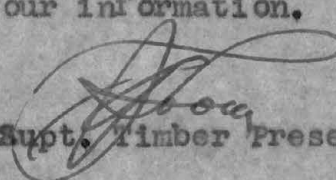
Mr. Bernard Blum:

*within* Concerning completion of the Seattle contract ~~with~~ specified termination date: December 31st, 1936.

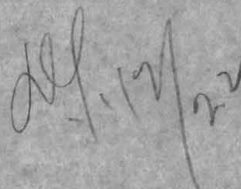
When the plant was opened on November 1st there remained to be treated 128,322 ties, which the contractor agreed was well within the capacity of the plant to treat before the end of the year. Since Nov. 1st approximately 100,000 ties have been treated leaving a balance on December 19th of only about 28,000 ties. This in spite of a shortage of empties for shipping treated ties, and tank cars for delivering fuel oil. Another set back to the plant has been our inability to furnish open cars only for treated tie loading. A large number of rough box have been furnished instead and this slows up the work because they are unable to make the best use of their cranes. Within the past few day there has been a shortage of all classes of cars for this service. I have a note from Seattle this A.M. stating that "Yardmaster at Seattle and Car Distributor, Tacoma say they will do all they can but cars are very hard to get."

In view of the difficulties mentioned it may be that we will not be able to treat the full number required within the time limit but at the worst only a few will remain and Mr. Horrocks advises that "There is no intention of penalty if treatment of necessary ties runs over the contract period."

This for your information.

  
Gen'l. Supt. Timber Preservation.

Cy-L.Y. ✓  
G.R.H.





Saint Paul, December 9th, 1936

MR. H. E. STEVENS:

Your notation on the attached draft of letter concerning renewal of the contract with the WEST COAST WOOD PRESERVING COMPANY:

Please refer to page 2, paragraph starting -

"Tenders were requested from all operators.....":

You show that on the basis of the Colman bid the cost would be approximately \$1.8374 per tie. That figure is correct for the tie installed in track on Tacoma Division, including the tie itself, and the cost of insertion and treatment. In all the other figures which you have used in this draft, only the money we pay the Preserving Company is employed, so that it seems to me that this one paragraph might be revised to read substantially as follows:

"Tenders were requested from all operators on the Coast that were in a position to meet our requirements, either by building a new plant or by enlarging an old one; and the contract was awarded to the Colman Company, the low bidder, on terms which we estimate would make the cost of a tie installed approximately \$1.8374. This was about four cents per tie below our estimate of the cost of treating ties at the Paradise plant and shipping to the Coast, although the bid price of Colman was somewhat higher than our own at Paradise for treating costs."

Attached is a memorandum dated December 8th, showing the estimated profit to the contractor, to support the statement shown on page 4 of your draft, as follows:

- A - Showing profit of \$69,885 or \$6988 per year, based on a plant completely amortized during the contract period now expiring.
- Showing profit of \$111,785, or \$22,357 per year, if awarded the proposed new contract and no cost is included for amortizing the plant.
- B - On the basis of amortizing the plant and spreading the interest over a period of fifteen years to cover the terms of the present

and the proposed contract, his total profit would be \$136,670, or \$9,111 per year.

I would call your attention to the fact that under the plan of amortizing the plant over the fifteen year period there is shown a loss to the contractor of \$6215 for the next five years. The reason for this apparent loss is that there are \$100,000 amortization and \$18,000 interest to be spread over a million ties, or nearly 12 cents per tie. Under plan A the total profit to the contractor is \$181,670, or \$12,111 per year. Under plan B the total profit is \$136,670, or \$9,111 per year. The reason for this apparent difference in profit to the contractor under plans A and B is the additional theoretical setup of \$45,000 interest charges when amortization is spread over a term of fifteen years.

In regard to the investment which we estimate at \$300,000 made by the Colman Company in order to fulfil the requirements of the present contract: Land value is not included in that figure. The Colman Company owned the land, so for that item no setup was made in our figures. Tracks were included at but \$12,000. Bulkheading and grading were estimated at \$52,000. The balance consists of tanks, retorts, boring machinery, trams, condensers, buildings, cranes, etc.

bb/s  
3x

*W.F. 17/16*



Estimated Profits to Contractor for Treating N. P. Material  
At Seattle under Present and Proposed Contracts on Basis "A",  
Amortizing Investment during Present Contract and "B", Amor-  
tizing investment during Present and Proposed Contracts.

	"A"		"B"	
	Ten Year Period 1926 to 1936	Five Year Period 1937 to 1941	Ten Year Period 1926 to 1936	Five Year Period 1937 to 1941
Contract payment for ties	\$ 655,142	\$ 233,100	\$ 655,142	\$ 233,100
Contract payment for other material	<u>170,535</u>	<u>58,400</u>	<u>170,535</u>	<u>58,400</u>
Total	\$ 825,677	\$ 291,500	\$ 825,677	\$ 291,500
Contractors operating costs including overhead and taxes, but excluding plant investment	\$ 356,792	\$ 179,715	\$ 356,792	\$ 179,715
Amortization of plant	\$ 300,000	-	\$ 200,000	\$ 100,000
Aggregate interest at 6% on unamortized investment	<u>\$ 99,000</u>	<u>-</u>	<u>\$ 126,000</u>	<u>\$ 18,000</u>
Total	\$ 755,792	\$ 179,715	\$ 682,792	\$ 297,715
Profit	\$ 69,885	\$ 111,785	\$ 142,885	( \$ 6,215 )
Profit per annum	6,988	22,357	14,288	( 1,243 )
Average profit per annum		\$12,111		\$9,111

Office of Chief Engineer,  
St. Paul, December 8, 1936

Paradise, Mont.,  
December 7th, 1936



Mr. L. Yager:

Replying to your wire X-10 requesting data on estimate of \$300,000 covering our ideas of cost of Seattle treating plant and layout in connection with original contract at Seattle:

My estimated figures for this cost are as follows:

Land previously owned by J.M. Colman Co.	
Hydraulic fill, 180000 yards at 20¢	36,000 ✓
Creosoted Pile Bulkheads and plank	16,000 ✓
Buildings	25,000 ✓
Retorts	54,000 ✓
Transfer Table	5,000 ✓
Colby Crane	36,000 ✓
Small Bridge Crane	7,000 ✓
Tracks, Crane and Standard	12,000 ✓
Boring Machine, Incisor, etc.	36,000 ✓
Conveyor	3,500 ✓
Tanks	18,000 ✓
Pumps, Compressors, Pipe Lines, Valves, etc.	12,000 ✓
Locomotive	7,500 ✓
Trams	23,000 ✓
Condensing apparatus	8,000 ✓
Laboratory	1,000 ✓
Total	<hr/> \$300,000

From oral figures obtained at various times from plant men and officers, I believe that this total is fairly close.

The figure for creosoted pile bulkheads may be a little high.

The cost of the land is hard to obtain. Originally Colman could not have paid very much for it as he has owned the location for a long time, but the present valuation is doubtful. I have had estimates anywhere from \$5000 per acre to \$10,000 from our own land valuation people. There are about 8.5 acres in the new fill and used by the tie plant.

CC-AJL

*Handwritten signature and date: 12/14*

*Handwritten signature: G.R. Stephens*  
Asst. Gen. Supt. Tim. Pres.



May 12/7

Contractor investment in the Treating Facility  
West Coast Wood Preserving Co, Seattle

Cranes	\$ 43,000.
Trucks	12,000.
Buildings	25,000.
Retorts	54,000.
Boring Machine	39,500.
Tanks	18,000.
Pumps, Lines, Valves	12,000.
Locomotives	7,500.
Trams, Condensers & Incidentals	37,000.
Bulkheading & Fill	<u>52,000</u>
Total	\$ 300,000

Coeman owned all land previously.

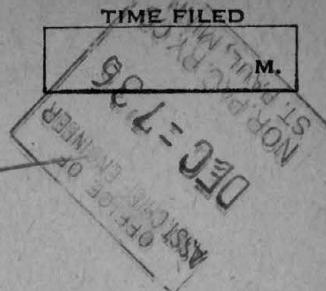


N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

MDK

PARADISE DEC 7 1936 56 L YAGER ST PAUL  
57 A G LOOM BRAINERD



AM WIRING L Y AS FOLLOWS. X-10 CRANES 43000 TRACTS  
12000 BUILDINGS 25000 RETORTS 54000 BORING MACHINE 39500  
TANKS 18000 PUMPS LINES VALVES 12000 LOCOMOTIVES 7500  
TRAMS CONDENSORS AND INCIDENTALS 37000 BULKHEADING AND FILL  
52000 STOP COLMAN OWNED ALL LAND PREVIOUSLY H- 21

1246 PM

G R HOPKINS





N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

S/P Paul 12/6/36

G. B. Hopkins  
Paradise

Find <sup>we</sup> I did not retain copy of your estimate of  
Contractors investment of 300,000 dollars to take on our  
treating contract at Seattle. Please wire your  
approximate figures by subdivisions of equipment  
Cranes, tracks bldgs. + etc. Stop. What did you  
estimate for land or cost of its preparation in  
the way of filling in preparation for seasoning  
yard. I assume property was originally owned  
by Coleman X10.

ay Mager

MEMORANDUM

Estimated Profits to the Contractor on several Bases for Treating N. P. Material at Seattle.

- (A) Present Contract terminating Dec. 31, 1936. Amortization 10 years, interest at 6%

(1) Profit on Cross Ties	2,858,514 @ 1¢	\$28,585 ✓
(2) " " Switch Ties	8,761 M @ \$1.29	11,172 ✓
(3) " " Lumber and Piling	6,740 M @ \$4.47	30,128 ✓
Total for Ten Years		\$69,885 ✓
Profit per Year		\$ 6,988 ✓

- (B) Profit on next 5 year period - no amortization or interest on Investment as was absorbed in first ten year period. Based on 200,000 ties per year or 1,000,000 total.

(1) Profit on 1,000,000 cross ties @ .09515	\$95,150 ✓
(2) " " 2,500 M switch ties @ \$1.29	3,225 ✓
(3) " " 3,000 M lumber and piling @ \$4.47	13,410 ✓
Total Profit for 5 Years	\$111,785 ✓
Profit per year	\$ 22,357 ✓
 Total Estimated Profit for 15 years	 \$181,670 ✓
Average Profit per year	\$ 12,111 ✓

- (C) Profit assuming amortization over a period of 15 years and interest at 6%

(1) Profit on cross ties	3,858,514	78735
(2) " " switch ties	11,161 M @ \$1.29	\$ 60,018
(3) " " lumber and piling	9,740 M @ \$4.47	14,397 ✓
Total 15 years Profit		43,538 ✓
Average Profit per year		\$117,953 136670
		\$ 7,863 9111

- (D) Division of Profits between first 10 years and second 5 year periods

(1) Profit first 10 years	\$ 96,885	142885
(2) Profit second 5 years	21,068	62157
Total	\$117,953	136670

Asst. Chief Engineer  
St. Paul, Minnesota  
December 5, 1936



A) Directly Assagul Ins 2,858,514 @ .0884 = 252,693  
 B) Directly " Taxes 2,858,514 @ .0036 = 10,191  
 C) General Assagul 2,858,514 @ .025 = 71,462  
 Total 2,858,514 @ 334,346

Total Cost 1,000,000 @ .13795 137,950

### Summary

Cost 10th year 2,858,514 Ins 334,346

Cost 2nd 5 yrs 1,000,000 " 137,950

Total Direct Cost 472,296

Amortization 300,000 in 15 yrs 300,000

Insurance 300,000 @ 6% 144,000

Total Costs 916,296

Receipts 10 yrs 2,858,514 @ 26% 743,214

Receipts 5 yrs 1,000,000 @ 23.3% 233,100

Total Receipts 976,314

Total Costs 916,296  
 \$ 60,018

Quanto ~~233~~ 100  
Cost 137,950  
Profit 95,150 /

Amalgam <sup>8</sup> 100,000.  
Interest 18,000  
Total ~~1~~ 18000



# Interest Calculation

Interest Rate

Depreciation  $6\frac{3}{4}\%$  15 yrs

Year	Principal	Int 5%	6%	Depreciation
1	300 000	15 000	18 000	20 000
2	280 000	14 000	16 800	20 000
3	260 000	13 000	15 600	20 000
4	240 000	12 000	14 400	20 000
5	220 000	11 000	13 200	20 000
6	200 000	10 000	12 000	20 000
7	180 000	9 000	10 800	20 000
8	160 000	8 000	9 600	20 000
9	140 000	7 000	8 400	20 000
10	120 000	6 000	7 200	20 000
		105 000	126 000	200 000
11	100 000	5 000	6 000	20 000
12	80 000	4 000	4 800	20 000
13	60 000	3 000	3 600	20 000
14	40 000	2 000	2 400	20 000
15	20 000	1 000	1 200	20 000
		15 000	18 000	100 000
		120 000	144 000	300 000
			$\frac{96}{48}$	

St. Paul, Minnesota

December 5, 1936.

Mr. Bernard Blum:

I am attaching hereto two copies of a memorandum on which are outlined the probable profits to the West Coast Wood Preserving Company under their contract on two bases for the first ten year period with an additional extension of five years, making a total term of fifteen years. There is, as is to be expected, not a very great difference between these two.

L. YAGER,

LY:m

encl.



MEMORANDUM

ESTIMATES OF PROBABLE PROFIT TO THE WEST COAST WOOD PRESERVING COMPANY  
CONTRACT ON SEVERAL BASES.

- (A) Assume entire cost of plant was amortized the first ten year period,  
resulting in no Investment Costs for the second five year period.

1. Profit on 2,858,514 cross ties @ 1¢	\$28,585	
2. " " Switch ties 8,661 M @ \$1.29	11,172	
3. " " Lumber and Piling 6,740 M @ \$4.47	30,128	
4. " " 1,000,000 cross ties @ .09515	95,150	
5. " " 2,500 M switch ties @ \$1.29	3,225	
6. " " 3,000 M Lumber and Piling @ \$4.47	13,410	
7. Total Profit for 15 years	\$181,670	
Profit per year	12,044	- 12111

- (B) Assume Amortization of plant investment in 15 years and interest at  
4% on decreasing principal.

1. Profit on cross ties 4,000,000	\$128,150	
2. " " switch ties 11,161 M @ \$1.29	14,397	
3. " " Lumber and Piling 9,740 M @ \$4.47	43,538	
Total Profit for 15 years	\$186,085	
Profit per year	12,405	

Asst. Chief Engineer  
St. Paul, Minnesota  
December 5th, 1936.

MEMORANDUM

ESTIMATES OF PROBABLE PROFIT TO THE WEST COAST WOOD PRESERVING COMPANY  
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Profit per year	12,405

Asst. Chief Engineer  
St. Paul, Minnesota  
December 5th, 1936.



# Northern Pacific Ry Co

① Statment A-A

12/5/36

Approximate estimates of costs to the Contractor for  
treating Cuss ties required for five year period as  
authored in Statment No 10 Sept. 10 - 1936

15 year period First 10 years @ 300,000 ties and 5 years 200,000 ties

(A) Directly Assignable Taxes	3,000,000 ties @ .08840	= 265,200
(B) Directly Assignable Taxes	3,000,000 ties @ .0036	= 10,800
(C) General Overhead	3,000,000 " @ .0250	= 75,000
Totals	3,000,000 " @ .117	= 351,000

(A) Directly Assignable Taxes	1,000,000 Ties @ .09635	96,350
(B) Directly Assignable	1,000,000 Ties @ .0036	3,600
(C) General Overhead	1,000,000 " @ .0380	38,000
Totals	1,000,000 " @ .13795	137,950

Overhead Investment Cost Let 4% Amortized 15 years

(1) Amortization of Plant	300,000 in 15 years $300,000 \div 4,000,000$	.075
(2) Interest on Investment	300,000 @ 4% = 12,000 $\div 4,000,000$	.003

Summary

17/5/26

Total Cost 10 years 3,000,000 lbs

351,000

Total Cost 5 years 1,000,000 "

137,950

Total Direct Costs

488,950

Amortizing  $\$300,000$  in 15 years

300,000

Interest on 300,000 @ 4%

96,000

Total Costs

884,950

Receipts 10 years 3,000,000 @ 26%

780,000

Receipts 5 years 1,000,000 @ .2331

233,100

1,013,100

884,950

128,150



# 

Departure 15 years

Interest 5% Int 4%

Years	Principal	Interest	Int 5%	Int 4%
1	300 000	15 000	20 000	12 000
2	280 000	14 000	20 000	11 200
3	260 000	13 000	20 000	10 400
4	240 000	12 000	20 000	9 600
5	220 000	11 000	20 000	8 800
6	200 000	10 000	20 000	8 000
7	180 000	9 000	20 000	7 200
8	160 000	8 000	20 000	6 400
9	140 000	7 000	20 000	5 600
10	120 000	6 000	20 000	4 800
		105 000	200 000	84 000
11	100 000	5 000	20 000	4 000
12	80 000	4 000	20 000	3 200
13	60 000	3 000	20 000	2 400
14	40 000	2 000	20 000	1 600
15	20 000	1 000	20 000	800
		15 000	100 000	12 000
Total		120,000	300,000	96,000

Chicago, Milwaukee, St. Paul and Pacific Railroad Company

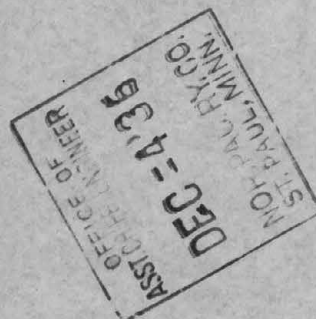
ENGINEERING DEPARTMENT

Union Station

R. J. MIDDLETON,  
Assistant Chief Engineer

CHICAGO,

Dec. 3, 1936



Mr. Bernard Blum, Chief Engineer,  
Northern Pacific Ry. Co.,  
St. Paul, Minn.

Dear Sir:

Referring to my letter of yesterday, about  
treating material at the Eagle Harbor plant, Seattle:

Neglected to state that the prices indicated  
for treated piling include the piling itself, as well  
as the cost of the preservative and processing; in  
other words, the 44 or 45¢ is the total cost to us  
of the piling on board cars at the treating plant.

Yours truly,

(Signed) R. J. MIDDLETON

RJM

Assistant Chief Engineer

✓  
Mr. L. Yager, Asst. Chief Engr.,  
Northern Pacific Ry. Co.,  
St. Paul, Minn.



Mr. L. Yager

# Chicago, Milwaukee, St. Paul and Pacific Railroad Company

HENRY A. SCANDRETT, WALTER J. CUMMINGS AND GEORGE I. HAIGHT, Trustees

ENGINEERING DEPARTMENT

Union Station

R. J. MIDDLETON,  
Assistant Chief Engineer

Chicago,

December 2, 1936

Mr. Bernard Blum, Chief Engineer,  
Northern Pacific Ry. Co.,  
St. Paul, Minn.

Dear Sir:

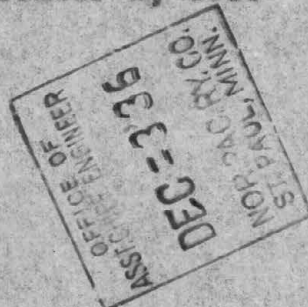
Referring to your wire of November 28th, asking for copy of our agreement with the West Coast Wood Preserving Co., covering creosoting of ties at Eagle Harbor:

Actually, we do not have any signed contract or agreement with the Wood Preserving Company. A few years ago, I am informed, we did make a contract for one year and subsequent thereto the understanding has been had by an exchange of correspondence or by quotations. You are familiar with the location of the Eagle Harbor plant and also know that we do not air season any of our ties or timbers. At the present time we are paying the following prices:

For processing or treating  
track ties - \$6.25 per M.B.M.

Switch ties - \$8.00

There is an additional charge of 60¢ per thousand for loading out these treated switch ties in sets. In cases where switch ties must be bored, there is also a charge of \$2.90 per thousand for boring. There is also a state tax of \$.087 per M.B.M., which is added onto our bill, and which we pay over and above the aforementioned unit prices. We also pay the cost of the creosote and fuel oil, and, as you know, such materials vary in price from month to month.



For treating lumber, including the cost of creosote, we are now paying:

8# treatment	-	\$21.00
10#	"	- 23.50
12#	"	- 26.50
14#	"	- 30.00

Find that our records here and in the Purchasing Department are not very good as to prices paid for treating piling because that is always handled by our Assistant Purchasing Agent, Mr. C. S. Finlayson, at Seattle, and vouchers or payments are made there. From such records which appear in our Purchasing Department here, however, it seems we are at this time paying 44¢ per lineal foot for 10# treatment of fir piling and 45¢ per lineal foot for 12# treatment, and I think these two figures include the cost of preservative.

Yours truly,

(Signed) R. J. MIDDLETON

RJM

Assistant Chief Engineer

Mr. L. Yager,  
Asst. Chief Engr.  
Northern Pacific Ry. Co.,  
St. Paul, Minn.



St. Paul, Minnesota  
November 30, 1936

Mr. Bernard Blum:

Referring to your letter of November 28th concerning the treating contract of the West Coast Wood Preserving Company at Seattle: I am now attaching three copies of Statement A revised to show the details you requested.

In my letters of September 25th and October 28th, together with several subsequent discussions, I pointed out the range of discussions with Mr. Horrocks on the subject of interest and depreciation on the plant investment made to take on the Northern Pacific business ten years ago. Mr. Horrocks has clearly taken the position that he intends to deal with this subject on a competitive basis, which means that these matters of interest and investment are no concern of the purchaser. Unless pressure can be applied, with which I am at the moment not familiar, to make the contractor discuss this matter on a basis other than the competitive circumstances, then all of these figures which we have presented are nothing more than academic discussions.

L. YAGER.

LY:m  
encl.

Statement A  
Revised 11-30-36.

NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ESTIMATES OF COSTS TO THE CONTRACTOR FOR TREATING CROSS TIES UNDER PROPOSED NEW CONTRACT AT SEATTLE FOR THE NUMBER OF TIES REQUIRED FOR TEN YEAR PERIOD AS OUTLINED IN STATEMENT No. 10, SEPTEMBER 10, 1936, (PARAGRAPH 5).

Contract price \$6.25 per M for complete treatment is equivalent to \$.2331 per tie (7 x 8-8'). Assume average of 200,000 ties per year.

(A) DIRECTLY ASSIGNABLE ITEMS

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - Steam, Power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and Supplies, track and bldg. maintenance	.02385
Sub Total	\$.09635

(B) DIRECTLY ASSIGNABLE TAXES

1. State Ind. Tax and Workmans Compensation \$.0215 per hr.	\$.0017
2. Federal Social Security Act 2.1% of labor	.0011
3. Business and Occupational Tax 1/4% Gross Business	.0008
Sub Total	\$.0036

(C) GENERAL OVERHEAD ETC.

1. General and Plant Supervision	\$.0180
2. Taxes on plant	.0180
3. Insurance on plant	.0020
Sub Total	\$.0380

(D) OVERHEAD - INVESTMENT COSTS (Interest 6%, Depreciation 5%)

1. Amortization of Plant \$300,000 in 20 years	\$.07500
2. Interest on Investment \$300,000 @ 6%	.04324
Sub Total	\$.11824



(E) OVERHEAD - INVESTMENT COSTS (Interest 5%, Depreciation 3%)

1. Amortization of Plant	\$300,000 in 33 years	\$.045000
2. Interest on Investment	\$300,000 @ 5%	.042375
	Sub Total	\$.087375

(F) OVERHEAD - INVESTMENT COSTS (Interest 3%, Depreciation 3%)

1. Amortization of Plant	\$300,000 in 3 years	\$.045000
2. Interest on Investment	\$300,000 @ 3%	.025425
	Sub Total	\$.070425

(G) OVERHEAD - INVESTMENT COSTS (No interest or depreciation)

1. Costs

---

SUMMARY ( (D) Interest 6%, Depreciation 5% )

A - Directly Assignable Items	\$.09635
B - Directly Assignable Taxes	.00360
C - General Overhead etc.	.03800
D - Overhead Investment Costs	.11824
Total Costs	\$.25619
Payments received	.23310
Loss	\$.02309
Loss per cent of Cost	9.02%

SUMMARY ( (E) Interest 6%, Depreciation 3%)

A - Directly Assignable Items	\$.09635
B - Directly Assignable Taxes	.00360
C - General Overhead etc.	.03800
E - Overhead - Investment Costs	.08738
Total Costs	\$.22533
Payments received	.23310
Profit	\$.00777
Profit per cent of cost	.34%

Statement A  
Revised 11-30-36  
Sheet 3

SUMMARY ( (F) Interest 3%, Depreciation 3% )

A - Directly Assignable Items	\$.096350
B - Directly Assignable Taxes	.003600
C - General Overhead etc.	.038000
F - Overhead - Investment Costs	.070425
Total Costs	\$.208375
Payments received	.233100
Profit	\$.024725
Profit per cent of Cost	11.86%

SUMMARY ( (G) No Interest or Depreciation Charges )

A - Directly Assignable Items	\$.09635
B - Directly Assignable Taxes	.00360
C - General Overhead etc.	.03800
G - Overhead - Investment Costs	---
Total Costs	\$.13795
Payments received	.23310
Profit	\$.09515
Profit per cent of Cost	68.97%

Note: In each case the first ten year's interest and amortization charges are allocated to the first ten year period ending December 31, 1936.

Assistant Chief Engineer  
St. Paul, Minnesota  
October 23, 1936  
Revised November 30, 1936

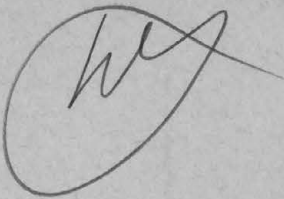


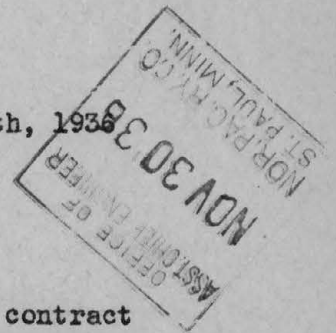
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# Interest Calculations

Interest Rate 3% Depreciation 3%

Years	Principal	Interest	Depreciation
1	300,000	9000	9000
2	291,000	8730	9000
3	282,000	8460	9000
4	273,000	8190	9000
5	264,000	7920	9000
6	255,000	7650	9000
7	246,000	7380	9000
8	237,000	7110	9000
9	228,000	6840	9000
10	219,000	6570	9000
		77850	90000
11	210,000	6300	9000
12	201,000	6030	9000
13	192,000	5760	9000
14	183,000	5490	9000
15	174,000	5220	9000
16	165,000	4950	9000
17	156,000	4680	9000
18	147,000	4410	9000
19	138,000	4140	9000
20	129,000	3870	9000
		50850	90000
21	120,000	3600	9000
22	111,000	3330	9000
23	102,000	3060	9000
24	93,000	2790	9000
25	84,000	2520	9000
26	75,000	2250	9000
27	66,000	1980	9000
28	57,000	1710	9000
29	48,000	1440	9000
30	39,000	1170	9000
		22850	
31	30,000	900	
32	21,000		
33	12,000		
34	3,000		

  
Saint Paul, November 28th, 1936



MR. L. YAGER:

In discussing the West Coast Wood Preserving Co. contract Wednesday with Mr. Stevens he asked me for a statement of the cost to the contractor of treating 200,000 ties on the basis of lower interest rate than shown in your statement A dated October 23, 1936.

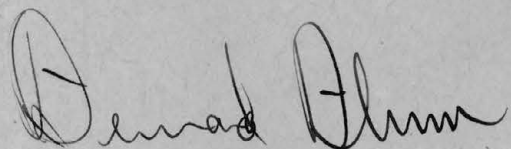
We had some discussion about the inclusion in the cost to the contractor of the \$300,000 investment made ten years ago - and which presumably was charged off through the payments we made under that contract. In order to show what the profit will be to the contractor on the basis of lower interest charge, and also on the assumption that he has written off the \$300,000 investment, will you add to statement A summaries as follows:

(F) With overhead investment cost based on interest at 3% and depreciation at 3%; and

(G) With no overhead investment cost.

In other words, G should be on the basis of eliminating amortization of plant, and interest on investment, and of course will be a summary of items A B and C as now shown on statement A.

bb/s





November 24, 1936.

Mr. H. E. Horrocks  
Manager -  
West Coast Wood Preserving Co.  
1118 - 4th Avenue  
Seattle, Washington

Dear Mr. Horrocks:

Referring to your letter of November 19th: We submitted the proposal soon after my return from Seattle. This submission resulted in a number of questions which we have recently answered. The matter is now receiving attention and we anticipate a decision soon, or at any rate prior to the end of the year.

I regret that it has taken so much time to handle this subject but will assure you that you will receive communication promptly as soon as the decision is reached.

Yours very truly,

LY:m

L. YAGER.

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.

November 19, 1936

L. Yager, Assistant Chief Engineer  
Northern Pacific Railway Company  
Saint Paul, Minnesota

Dear Mr. Yager:

IF THE FOLLOWING OFFER IS ACCEPTED, SHIPMENT OF MATERIAL WILL BE SUBJECT TO DELAY IN CASE OF STRIKES, LOCK-OUTS, FIRES, INABILITY TO SECURE CARS OR TONNAGE, TRANSPORTATION DELAYS IN TRANSIT OF MATERIAL OR OTHER CAUSES OF DELAY BEYOND OUR CONTROL OR BEYOND THE CONTROL OF ANY PARTY RESPONSIBLE IN FULL OR IN PART, TO THE WEST COAST WOOD PRESERVING CO., FOR THE FULFILLMENT OF THIS CONTRACT.  
TERMS: NET CASH TO US, PAYMENT 60 DAYS FROM DATE OF SHIPMENT; NECESSARY FREIGHT ADVANCES SUBJECT TO SIGHT DRAFT, WITH BILL OF LADING.  
INSPECTION AND/OR ACCEPTANCE OF MATERIAL AT OUR PLANTS IS TO BE FINAL.

It is some time since our minds met on the new contract for treating your material at our Seattle plant. The contract executed by your company has not yet been received.

If it is at all possible, we would like very much to know by not later than the end of the year whether or not the contract will be renewed.

Yours very truly,

WEST COAST WOOD PRESERVING CO.

By

Manager

HEH:I

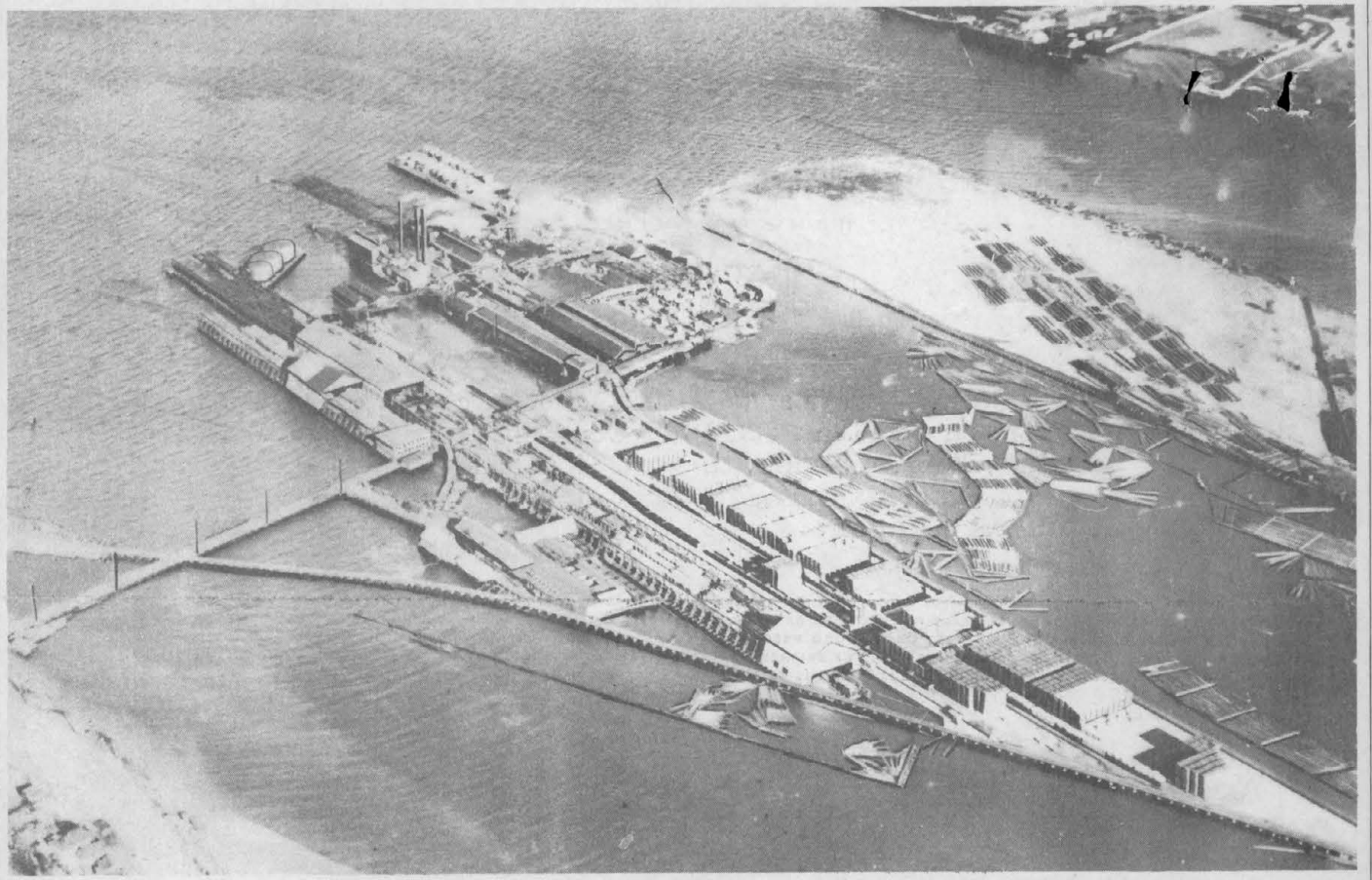
*Mr. Blair*

*Pls note and advise what if any reply should be made.*

*Mr. Yager:*

*I have now transmitted the answers to questions 1-16 and presume we will have an early decision. I suggest you advise Harrocks we expect to advise him in ample time before the end of the year*  
*11/23 B.B.*





AERIAL VIEW OF MANUFACTURING PLANTS



St. Paul, Minnesota  
October 28, 1936.

Mr. Bernard Blum:

Referring to your request for data to make direct replies to the sixteen questions raised in Mr. Stevens' letter of October 16th on the contract proposal for continuation of forest products treatment at Seattle with the West Coast Wood Preserving Company:

In my letter of September 25th I did not cover all the details of the discussions resulting from three or four days' conferences with Mr. Horrocks, but confined myself to those apparently more important phases and outlined certain conclusions dictated by the evidence. In order to now provide data for specific answers to these later questions it will be necessary to repeat and amplify previous statements in addition to carrying the review into phases not originally contemplated.

Mr. H. E. Horrocks, an engineer by training, was formerly the manager of the Pacific Coast Creosoting Company and since the consolidation of the Colman Company and the Pacific Coast Creosoting Company into the West Coast Wood Preserving Company has been the manager of that concern. Mr. Horrocks is a frank, fair-minded type of business man not given to bluffing and indulging in those forms of maneuvering so often encountered in jockeying for a position in horse trading transactions. The whole affair has been a candid discussion of a business relation to develop mutually advantageous arrangements. By reason of Mr. Horrocks' frank and fair attitude in the interpretation of contract provisions the operation of this contract has been even more satisfactory to us than were the relations with the Colman officers, and we know that the contract has likewise been profitable to the contractor. Mr. Horrocks is desirous of continuing these contract relations if mutually agreeable terms can be agreed upon. Sometime after the West Coast Company took over the operation of the Colman plant we approached Mr. Horrocks for a readjustment of some of the schedule provisions in the original contract which never were altogether satisfactory but nothing could be done about it with either Mr. Doan or Mr. Colman. After some negotiations certain revisions were made in price schedules covered by supplementary agreement February 24, 1933, effective as of December 1, 1932. In making these statements about the fair attitude of Mr. Horrocks I desire not to be misunderstood as in any way inferring that Mr. Horrocks does not have a keen insight into all of those features which affect the interests of his employer. He has a broad and clear conception of all those matters dealing with timber preservation in his territory and is familiar with the prices charged by his competitors, both in the railroad and commercial markets. He is not overlooking any opportunities to protect the interests of his concern. When we discussed this subject in general terms before I went to the Coast it was well understood that I would endeavor to develop all the possibilities of a favorable



Mr. Bernard Blum - 2  
October 28th, 1936 .

contract on the basis of discussing the merits of any proposal that might arise. It was clear that for these first contacts, at least, there should be no arbitrary proposal on our part based on a "take it or leave it" attitude. That, however, did not foreclose taking that position at a later time if it should be concluded that the circumstances warrant that course of action without incurring unfavorable repercussions.

(1) Statement No. 6 is an estimated segregation of costs to the contractor for treating cross ties only for the ten-year period as stated. These unit costs are estimated from our own experience because most of the operations are very similar to our own, and Mr. Hopkins, through his years of contact with the plant, was able to observe the operations carefully for the determination of their costs and likewise had considerable information on the rates of pay. Treatment of cross ties is a rather typical illustration of mass production affording many opportunities for close estimates of unit costs. These estimates manifestly are not presented as accurate but they are sufficiently reliable for any purpose to which we might devote them. This statement was prepared not only for its incidental value in connection with any discussions which Mr. Horrocks might permit with respect to the result to his company of their participation in the contract, but also to have something available as a likely measure of costs in connection with the possibilities of any other concerns offering to construct a new treating plant for the purpose of taking on Northern Pacific business in connection with commercial treating business.

(2) The figure of \$300,000 represents our estimate which we think is fairly accurate of the total investment of the contractor in facilities added to his original plant for the purpose of handling our contract. In dealing with this subject we are immediately confronted with making a decision as to how to dispose of the annual charges related to the created investment. Individuals may properly differ as to how these charges should be spread but there can be no questioning the conclusions that these charges in a solvent business must eventually be absorbed in the product purchased by the consumer. It is this important annual investment charge which stood in the way of constructing our own plant when this subject was considered in 1926, and is still the barrier to the construction of a plant on the Coast for the purpose of realizing those economic advantages resulting from the ownership and operation of our own plants. The set-up in No. 6 is obviously the extreme case and could only be justified on the assumption that the original contractor could not anticipate the continuation of the contract relations with the Northern Pacific or any other party. If that statement of facts could be demonstrated to the taxing authorities, then the contractor would undoubtedly be permitted to show a 10% depreciation of his investment in his income tax returns. As the matter now stands the contractor will be allowed a depreciation rate which the taxing authorities already have approved for that type of business, and

Mr. Bernard Blum - 3  
October 28th, 1936 .

it is safe to say this is considerably less than 10%, because the contractor can not, or more properly putting the case, does not intend to show that this facility will no longer be devoted to the purpose for which it was created. In case there were no future contract relations the contractor would have a plant free of cost for conversion to other purposes or disposition for its salvage value.

As is well understood, the item of depreciation relates more particularly to the possibility of obsolescence because satisfactory operating condition of the plant is usually maintained by current repairs. A contractor is concerned in obsolescence by reason of a possible change in treating methods or for the disappearance of railroad contract work by reason of the change in the railroad practice or the appearance of additional commercial competitors in the field for such business as may be offered. All of these phases of the subject were discussed in considerable detail with Mr. Horrocks but the conclusions could not be capitalized because Mr. Horrocks made it clear that he had not assumed and did not see any reason to justify assuming any obligations to enter into a contract to treat material for us at cost plus a pre-determined rate of profit. That is a logical position because we were likewise not in a position to assume the necessary obligations on our part with respect to that type of contract relationship. Mr. Horrocks desires to maintain future relations on contract provisions which are mutually satisfactory predicated upon the competitive conditions as determined by the commercial market or the costs determined by the operation of our own plants. That fact places all of these calculations and assumptions in the category of an academic discussion. I have restated Statement No. 6 in Statement A-1 to show the results for different assumed bases for amortization and interest charges.

In 1926 we had proposals, one from the Long Bell Lumber Company and another from the National Lumber & Creosoting Company based on a guaranteed volume  $2\frac{1}{2}$  times that which we were able to offer. Their proposals were considerably higher than the Colman Company, undoubtedly largely due to the fact that the Colman Company's additional investment was for the enlargement of an existing plant, whereas the other companies would have to create complete new facilities at a considerably greater cost. The other proposals were withdrawn when the minimum stipulations could not be met. In view of the past history it must be evident that the West Coast Company will be at a decided advantage in a competitive situation in the event competition is offered through the construction of a new plant on the Coast. Mr. Horrocks is not intending to sacrifice this or any other advantage which his company may possess, and as I have previously stated, there is no apparent intention of unnecessarily depressing unit treating prices. Mr. Horrocks stated that his prices were already considerably below the existing level and he was not interested in taking on business with the uncertainties in volume at a rate lower than outlined in the proposal. I think it proper to state here that the present general level of treating prices was largely influenced originally by the contract with the Milwaukee because the Eagle Harbor plant has no



Mr. Bernard Blum - 4  
October 28th, 1936 .

seasoning storage facilities and the Milwaukee were not inclined to assume the carrying charges on seasoning ties for the purpose of realizing a greater economic tie life obtainable from treated air-seasoned ties so that the contractor found it necessary to make a treating rate which eliminated the usual charges for cylinder time involved in treating green material.

(3) Section C, Statement No. 6, shows an interest rate at 6% on \$300,000. The charges are figured in succeeding years on the depreciated principal so that the total interest charge is \$99,000 for the ten-year period instead of \$180,000 which would be the figure if straight interest were computed throughout the ten-year period.

(4) This has been practically covered by the discussion under No. 2. Statement A attached, which is a restatement of Statement No. 6, under the last grouping, shows the investment costs at an interest rate of 5% and depreciation rate of 3%.

(5) Statement A is similar to Statement No. 6 in showing the probable results for the second ten-year period for the material as outlined in Statement No. 10 using the rate for cross ties set up in the proposal and is based on an average of 200,000 ties per year. In view of the fact that our probable use of material other than cross ties is still more uncertain than the probable cross tie requirements, I have absorbed the investment costs in the tie treatment set-up. By reason of the fact that certain more or less fixed operating costs are involved and that the annual investment costs are all absorbed by the ties, this statement shows on the basis of 6% interest and depreciation of 5%, the operation predicts a loss of \$.02309 per tie or 9.02%. This merely means that if the contractor handled nothing but cross ties he would not realize the estimated investment costs but he would still show some rate of return on the investment. In the set-up where interest is taken at 5% and depreciation at 3% there is a profit of \$.00777 per tie or .34%.

(6) Statement No. 6, as explained, deals only with cross ties for which we have fairly reliable cost data on all the plant operations that are involved. We do not have such comparable data on the handling of switch ties, lumber and piling. The costs of handling lumber and piling are quite variable, depending upon the character of the material and the amounts handled. It would be possible, of course, at considerable effort to obtain a fairly reliable prediction on these items, but that would take a long time and the results under the circumstances would add little or nothing in the way of determinative value in the appraisal of the situation. By means of interpolation I have estimated the probable profits on these items as shown in Statement B. It is, therefore, not proper to apply the 4% against the item of \$825,677 shown in Statement No. 11.

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(7) Statement B is a set-up of the probable profits to the contractor under the present contract, Sub-division A, and under Sub-division B likewise the probable profits under the proposed contract for the amount of material covered by Statement No. 10. These set-ups take into consideration two bases for the disposition of the investment costs. The probable profits shown under Sub-division B are, even with the uncertainties, rather modest for operations in that industry. On the same basis the Great Northern contract at Hillyard, effective May 1, 1937, promises to return to the contractor a profit of about \$70,000 per year if the output is all confined to cross ties, and a considerably larger profit if any material portion of the business is out-put other than cross ties. It should be stated, however, that the yearly volume of business to be offered by the Great Northern under their contract is about 2.4 that estimated for our own needs on Statement No. 10. The \$70,000 mentioned above relates to the Great Northern business and no attempt has been made to estimate the profits on commercial business.

(8) We do not have a copy of contract between the West Coast Company and the Milwaukee Company. It is our understanding that there is no term contract. There is an understanding which continues from year to year. We know that the Milwaukee price for treating cross ties is \$6.25 per thousand, and that is the same rate as outlined in the new proposal. The new contract draft provides in the event the contractor makes any lower price to any other parties, that lower price immediately becomes effective for the Northern Pacific. I have previously explained that the volume of the Milwaukee business has been greater than that of the Northern Pacific, and is likely to so continue in the future. That fact is undoubtedly one of the controlling reasons why Mr. Horrocks is not inclined to make a lower price to the Northern Pacific because he would undoubtedly be under obligations to make the same concessions to the Milwaukee. The reduction of twenty-five cents per thousand and the operations of the other features of the proposal, as I have stated in the second paragraph of Page 3 of my letter, would mean a reduction of about \$30,000 for the quantities shown on Statement No. 10. The reduction would have been roughly \$43,000 if applied to the material under the present contract shown by Statement No. 8.

(9) Statement No. 9 is a comparison of the unit prices as between the present Northern Pacific contract and the present Great Northern contract of June 1936 and the contract of June 1, 1936, effective May 1, 1937. There is also included an abstract of the contract to show the operation of the rental payments. Statement 9-A shows similarly a comparison of unit prices between the proposed Northern Pacific contract to be dated January 1, 1937 and the existing Great Northern contract and the contract which becomes effective next May. Statement No. 13 is my attempt to show the probable results to the Great Northern and to the contractor of the operation of the contract effective next May. I started out, as explained, by making this a short-cut approach through eliminating the effect of the rental payment because



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it must be obvious that whatever rental payments the contractor makes are either passed immediately back to the Great Northern in the prices for its product or proportionately to the commercial output. I stated that for the purpose of simplicity I have assumed the extreme that the entire rental payments would be absorbed by the Great Northern product. For the purpose of clarification and avoiding any further explanation for the short-cut method, I have restated Statement No. 13 in Statement C, and have followed the presentation through in a logical manner avoiding any short-cuts to the final result which, of course, must be the same in the end. This shows that the Great Northern cost per average tie is \$.1039 greater than the Northern Pacific proposed contract, or practically 45%. The profit to the contractor is shown as \$.12382 per average tie, or practically 60% of his total costs. These comparisons should be made with Statement A showing that the Seattle contractor on the basis of interest at 6%, depreciation 5%, shows a loss of \$.02309, or 9.02%. On a basis of interest at 5%, depreciation 3%, the profit is slightly less than 1% per tie, or .34%. The net cost to the Great Northern for an average tie is \$.337 and to the Northern Pacific under the proposed contract \$.23321.

The Hillyard contract situation by reason of the fine modern type of plant and the large volume of business offered presents a rather unusual set of circumstances for treating ties at a low figure. The Great Northern officers from their own experience in operating treating plant and their knowledge of prices charged commercial plants for railroad work are thoroughly familiar with what are fair and reasonable prices for this work so that the contract is unquestionably based on justifiable grounds. This contract set-up is not presented as being representative of commercial tie treating costs or as necessarily being typical of railroad plants leased to contractors.

Considerable time was devoted to exploring costs of treating ties at commercial plants on the Coast, and in the vicinity of the Twin Cities, for the purpose of determining the reasonableness of the new proposal outlined in the contract draft. Statement No. 14 showed the cost to the S. P. & S. for treatment of ties at Hillyard in 1932 and the treatment in Hillyard and St. Helens, which are competitive for this business, in the year 1936. The treating costs of \$9.50 per thousand at Hillyard in 1932 and \$8.50 at Hillyard and St. Helens in 1936 are to be compared with the \$6.50 per thousand in our present contract, and \$6.25 in the new proposal. The \$8.50 per thousand rate is \$2.25 per thousand higher than the proposal rate and amounts to \$.084 per tie. The higher rate has no doubt mitigated to some extent against the more generous use of treated ties on the S. P. & S. properties. It would be possible to treat S. P. & S. ties at the Seattle plant, using the Northern Pacific source of ties, season them and treat them at Seattle under a treating in transit rate to be established if such a rate does not now exist, and the haul would return to the Northern Pacific and the Great Northern a rate of \$.004 per ton mile as developed from the \$2.25 per thousand increased cost. The out of pocket profit would be the difference

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between the actual ton mile cost and \$.004 per ton mile return. It would be necessary, of course, to handle this business on published tariff rates but the effect of that would be washed out by dividing the haul equally between the two companies. This example is intended merely to illustrate the significance of the difference in contract treating prices. I am well aware of the fact that traffic policy would not permit the adoption of such a plan.

(10) By reason of the somewhat unusual contract at Hillyard I realized that it would be pertinent to obtain whatever information might be available as to the probable volume of the commercial business handled at that plant. I was unable to think of any reason that would justify our asking the Great Northern for the necessary data. That is the only source from which reliable information on this point could be obtained. I pointed out how I had made a very rough approximation of the volume and estimated that this would return a tariff rate of about fifty cents (\$.50) per cwt. and that suggests a gross revenue of \$216,000 per year. In the absence of any information as to what portion of this business is local or long haul and no knowledge as to the origin and destination, it must be obvious that this is a very rough and uncertain estimate.

At the time the present contract was entered into our Traffic Department took a greater interest in the shipments from the Colman plant to determine whether or not we were obtaining our proper share on the haul of competitive commercial business by reason of these contract relations. In the earlier years there was considerable discussion about this phase of the subject and we extended our aid with Mr. Colman at various times to see that our interests in this respect were protected. Having this in mind when I was on the Coast I asked Mr. Burnham whether he had any complaints regarding this matter, and I also talked with members of his staff, and I understood that our Traffic Department were satisfied with the results. Sometime in July Mr. Burnham's office gave me a check on the number of commercial loads for a period of a year. Mr. Hopkins checked this statement from the books of the contractor and that gave rise to Statement No. 12. We did not go to the work of checking up the origin and destination of these cars for the purpose of determining the Northern Pacific divisions of the revenues from an examination of the way bill abstract files. That could be done, but it would take considerable time. If we apply to the Northern Pacific business on Statement No. 12 the same approximate average return per car for all cars, the same as was estimated for Hillyard, we obtain for 1935, 84 cars at \$330, \$27,720; for the first six months of 1936, 96 cars at \$330, \$31,680; or for the 18 months' period ending June 30, 1936, a total of \$59,400. The percentage division of cars as between the four carriers shown on Statement No. 12 is fairly representative of the ten-year period of the existing contract. The output, of course, has varied considerably year by year and during the past year has been picking up to a considerable extent by reason of the increased demand for highway structures in connection with Federal Aid Projects.



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(11) So far as we have been able to learn the Union Pacific never had any of their company material treated at the Seattle plant in the past ten years. All of their company material is treated in their own plant at Dalles, Oregon, leased in recent years to the Forest Products Treating Company of Portland. The Great Northern have had little or no company material treated at this plant in the past ten years. We are certain that no company material has been treated there within the past four or five years. The Milwaukee Company, as you know, have all of their company material treated at the Eagle Harbor plant of the West Coast Company. The Milwaukee barge their material between Seattle and Eagle Harbor. The Union Pacific, Great Northern and the Milwaukee can reach this industry through published tariffs covering treating in transit and that is the reason they participate in this business. The competitive traffic is, of course, subject to routing solicitation. It is estimated that the treating company may influence the routing on anywhere from 25 to 50% of the competitive business. It is the intention of the creosoting company to divide this portion of the business over which they exercise some degree of control equitably between the Northern Pacific and the Milwaukee by reason of their contract relations with these two companies. Mr. Horrocks stated that if the Northern Pacific did not have its material treated at their Seattle plant there would naturally be no incentive for them to have any particular concern in routing any competitive traffic over the Northern Pacific.

(12) On Statement D, I have shown the comparison of average yearly costs for domestic and foreign creosote at Seattle, based first on treating 300,000 cross ties per year, shows an increase of \$7,545; similarly for 200,000 cross ties, \$5,030; and for 100,000 cross ties, \$2,515. The increased cost for domestic creosote over foreign creosote amounts to \$.674 per thousand, or \$.02515 per average tie. The increased cost for using domestic creosote on the total forest products shown by Statement No. 10 would be about \$57,664, or \$5,766 per year.

The item of evaporation and the gain by reason of avoiding the loss of sludge accumulation as previously mentioned must of necessity be small, and it is not susceptible of reliable determination. Our own experience at Brainerd suggests that the sludge loss amounts to possibly one-half of 1% of the creosote cost. This would add roughly \$306 to the treatment of 300,000 ties per year. That calculation, of course, makes no allowance for the difference in residue between the foreign and domestic creosotes.

There is some still undetermined difference in value between the two grades of creosote by reason of residue characteristics. The foreign oil is regarded as having better toxic qualities. It is definitely known that it is easier to obtain the desired absorption with a lighter residue creosote. To obtain the same penetration with the heavier residue creosote requires increased pressures and higher temperatures which has some unknown detrimental effects in treating timber.

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The record of creosoted oils used at the Seattle plant in the interval 1913 to 1932 shows a residue varying from 9.5% to 27%, the average being below 20%. In this statement I am excepting the war period, 1914 to 1917, when foreign oil was not available, and the domestic creosote residue ran as high as 64.65% and generally above 40%. Oil received in 1934 to 1936, European and Japanese creosote, had a residue 12.7% to 17.01%. The Japanese oil was uniformly low in residue. In 1934 there was a period when foreign creosote was not readily available and some domestic creosote was purchased with a residue of 27.05%. The Northern Pacific experience with domestic creosote shows residue of 20% to 45%, recently the residue is quite generally lower than the higher rate.

My statement in second paragraph, Page 4, of my letter of September 25th about the Santa Fe practice was quoted from memory of my conversation with Mr. Harris. I am now attaching a copy of his letter of September 24th more specifically stating their practice. I am also attaching Statement D-1 containing some abstracts of orders placed by the Santa Fe for creosote during January 1936 for the purpose of comparing their unit prices with our own. The only prices which are directly comparable with our own are those orders placed in the Chicago district f.o.b. their own tank cars for rail shipment to their inland plants. This shows that the average Santa Fe price is \$.1306 compared to the Northern Pacific \$.12375 a difference of \$.00715 or an increase of 5.8%. The Santa Fe regard this increase in cost more than justified. I shall not here elaborate further on this question of differences in creosote quality because as previously explained it has no determinative bearing on the acceptance or rejection of the contract proposal.

(13) Since we abandoned the creosote coal tar mixture we have quite generally designated our practice as the 50-50 mixture. It started, as I now recall, at 50% crude oil and 50% creosote coal tar mixture. We later on eliminated the coal tar mixture and used 45% No. 1 creosote and 55% crude oil and still retained the designation as a 50-50 mixture treatment to distinguish it from the straight creosote treatment. These proportions are by volume. The weight designation would be crude oil 51.93, creosote 48.07%. The designation makes no particular difference because under the contract we can vary the proportions of creosote and crude oil at our discretion.

(14) Statement No. 2 is a summary of the total cost of Inland Empire ties treated at Paradise and shipped to Seattle plant territory. Items 2, 3, and 4 under A are taken from the detail statements of unit costs, Statement No. 5, where interest on investment and depreciation of plant are Items 1 and 2-B, and they are, therefore, included to the amount of \$.022 in Statement No. 2. This item of \$.022 is set out specifically as



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a possible deduction when considering a strictly out of pocket cost basis and attention was directed to that item for that purpose in the discussion. We are not required or even permitted in the accounting classifications of maintenance of ways and structures expenses to make any charge for interest and depreciation on plant investment and, therefore, our investment still stands on the books in capital account at the accumulated figure up to date. If we had charged out depreciation at something like 3%, the investment would be practically written off by this time. We do, however, charge an item of interest and depreciation on ties furnished in joint facility track maintenance and construction in recognition of the fact that these items are included in some degree in all ties treated by contract, and the Northern Pacific is entitled to that consideration when it furnishes ties treated at its own plant in joint facility operations.

That depreciation which covers obsolescence and the accrued repairs or replacements is a legitimate charge against the product of an industry and is recognized by law in that appropriate deductions are permitted to the industry in making income tax returns. Differences of opinion with respect to measuring this item, to which I have previously referred, likewise prevail between the industries and the Treasury Department in income tax transactions. In comparing the cost of treatment by contract with the cost of work performed in company-owned plants, the statement is generally made that the railroads do not charge themselves with the investment costs of interest and depreciation, and it is for that reason that we have been in the habit of showing these items in our calculations used for these comparative purposes. We have never deceived ourselves as to the significance of this inclusion when the comparisons were judged on an out of pocket basis. Our plants are now nearly 30 years old and to all intents and purposes are still adequate and functioning essentially as efficiently as when they were new. This is largely due to the fact that in that interval of time there have been no radical changes in treatment practices insofar as our needs were concerned to suggest the operation of obsolescence. When we come to consider this matter of investment costs we must give due consideration to the fact that our plants were constructed at a time of a low level of construction costs so that our total investment is still only about \$200,000, whereas the Colman Company had to make an investment of \$300,000 in 1926 in an addition to their existing plant to take on the contract. The Great Northern plant at Hill-yard cost something in excess of \$500,000, and that is roughly the expenditure that would be involved in the construction of a new plant on the Coast.

(15) As I have previously explained, the contractor by reason of the uncertain volume offered and the trend of increasing labor and material costs would not make the proposal apply to a ten-year term. He

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would much prefer a contract from year to year. He is willing, however, to make this proposal cover a period of five years. Mr. Horrocks has some knowledge at least of negotiations between the Northern Pacific and the treating companies for the lease of the Paradise plant or the construction of a new plant in the vicinity of Seattle for handling railroad and commercial business. The only railroad business of any consequence in sight tributary to Seattle is that of the Milwaukee and the Northern Pacific. His company would be most intimately concerned with this new competition in the field. He is, therefore, desirous of keeping the Northern Pacific business at a figure which will not detrimentally influence the interest of his company as he views the situation. It is apparent that if and when this potential competition fades out of the picture he or his successors will be in position to increase in some degree the price on tie treatment without jeopardizing the railroad's economics of treated tie use. In view of the trend of increasing labor and material costs and these other considerations which I have mentioned, it was my personal view that we would be justified in accepting a five-year contract period for this proposal. It is apparent, however, that if there is any likelihood of our abandoning the use of treated ties or we intend to deal with another contractor, either through leasing the Paradise plant or with a new plant to be constructed on the Coast, this proposal, if accepted at all, should be on a year to year basis and then assume such risks as may be involved in having to pay higher prices which may possibly be imposed after the potential competitive atmosphere clears up. I shall not now take the time to discuss the business aspects both to the railroads and the contractor concerned with the construction of a new plant on the Coast.

(16) The entire investigation was directed towards the evaluation of the reasonableness of the contract proposal on the natural assumption that after the use of treated ties for a period of at least 25 years the economics of that practice have been definitely established.

While it has been definitely known for a considerable time that our treated tie practice has not developed the utmost in economic possibilities of treated ties, it is certain that treated ties have shown unmistakable economic advantages over the use of untreated ties throughout the System as a whole. Our tie plate protection for treated ties was up to 1923 admittedly entirely inadequate so that an unusually large percentage of treated ties failed directly from mechanical wear or from decay occasioned by the mechanical destruction. There have been relatively few ties which failed from decay as the primary causation. The influence of better tie plate protection is apparent in every-day observation.

In making economic comparisons the most important factor is the average life of the untreated tie and the treated tie and for that factor we must be guided by the results of our test tracks because general statistics of tie renewals are altogether too indefinite and uncertain for this purpose.



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We have some test tracks which are very extensive and the observations from these confirm the reliability of the results from the smaller standard test track sections. This discussion with respect to the Seattle plant territory must be related directly to the experience with Douglas fir ties. We have quite reliable records which indicate that the average life of the untreated Douglas fir is about eight years. It is reasonable conclusion from the evidences of the past to say that the larger tie plate will not in an important way increase the life of the untreated Douglas fir tie in main track because the decay life is still the controlling factor.

We have some reliable results from test tracks on the life of treated Douglas fir ties. All of these, however, were placed under small tie plates and the life of all these ties was fixed by the factor of mechanical wear so that there is necessarily introduced some element of speculation as to just how much longer these ties would last under the larger tie plates. It is a fact that in recent years our treating practices have been improved to make an important contribution toward extending still further the service life of treated Douglas fir ties. The records of the test tracks to which I have referred show an average life slightly in excess of sixteen years with 32% renewals. This partial average life projected on the renewal experience curve indicates a final average life of twenty years. It is not in any way distorting the significance of the evidence to conclude that treated Douglas fir ties with the improved methods of treatment and the larger tie plates as well as the generally improved track standards will in the main line give an average life of twenty-five years.

Statement E shows the annual costs as between treated and untreated Douglas fir ties in grades 4 and 5, both for twenty-five and twenty year average life of treated ties, and eight year average life for the untreated tie in each instance. This has been projected into the results per track mile and for all the main track mileage on the Tacoma Division shows a saving on a long interval period at the rate of \$107,798 per year. Statement E has been expanded to show the probable yearly savings through using treated ties throughout on all tracks tributary to the Seattle plant, separately for assumed twenty-five and twenty years average life of treated ties. For the purpose of affording at least a rough comparison the unit costs developed for the Seattle plant have been projected for the tracks tributary to the Paradise and Brainerd plants. The economy of the treated tie practice has been so generally accepted in the industry that all we can hope to accomplish by any new set of detailed figures from time to time is to more closely fix the economic limits. That is the thought in mind in resorting for the immediate purpose to the use of the same unit costs for the three plants. Summary A shows the economic results by plant output and in total for the System. The yearly System saving over a long period of years is \$1,437,315 for an average life of twenty-five years and \$1,072,074 for an average life of twenty years.

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Summary B shows the probable immediate yearly reductions in tie costs for a short interval of years following the reversion to untreated tie renewal throughout. For treated tie life of twenty-five years this is \$534,250, for twenty year average life equals \$667.813.

In the foregoing I have not discussed the tangible advantages in track maintenance arising from the fact that the use of treated ties requires on the average only about one-third the disturbance in each panel of track concerned with yearly tie renewals as compared with disturbances related to untreated ties. There is also the item of conservation of timber resources. All of these incidental advantages must necessarily take a secondary position in times of stress requiring the resort to the expedients of getting by. I should add here that for quite obvious reasons I have used the straight line method for computing annual costs because the sinking fund method does not square with actual practice in railroad maintenance transactions.

Statement E-1 shows the annual cost comparison of untreated and treated No. 5 Douglas fir ties based on the treating cost on the proposed contract at Seattle. From these figures it is readily possible to determine the economies under any assumed average life of treated ties. Statement E-2 shows the annual cost of treated ties in place for various average years of life for different contract treating cost per M FEM. This is to show the influence of deductions in contract treating costs and indicates clearly that it is necessary to project these figures in terms of cost per mile year in order to get the significance of a progressive change from \$6.25 per M to \$5.00 per M. Statement No. 3 is an approximate statement of the economic value of larger tie plates used with treated ties.

The decision of any management to change the practice from untreated to treated ties requires the payment of yearly premiums for a certain period of years to establish the economic cycle of treated tie advantage. These annual premiums do not return dividends until after that cycle has been established. It is this fact which prevented the general adoption of treated tie practice on the part of some carriers who were in straitened financial circumstances. After this economic cycle has once been established it must follow from an examination of the elements making up this set-up that the accrued premium payments can be cashed for immediate advantage for a short period of years by reverting at any time to the use of untreated ties so that the original position of higher annual costs will be gradually approached and fully attained after all the treated ties have been replaced by untreated ties. That situation is illustrated in the latter part of Statement E.

The use of treated ties is unquestionably justified from the economic aspects of annual maintenance costs. The decision to revert to the use of untreated ties must be based on reasons outside the field of transportation economics. The issues of financial expediency are corporate questions to be decided after a weighing of the elements of investor and public interest. That large



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group of statistical analysts who scout the characteristic indices of railroad operations to diagnose the physical and financial well being of properties in the interest of their investor clientele are prone whenever they have observed marked changes in practices such as a reversion to untreated after a long period of treated tie use to quite generally catalogue this as an evidence of existing or impending financial embarrassment.

The rejection of the instant proposal should not necessarily of itself spell the necessity to go back to the use of untreated ties. The use of Inland Empire ties treated at Paradise for the Tacoma Division will afford essentially the same economic results. Should that plan prove impracticable of accomplishment, then Coast Douglas fir ties could be treated at Paradise and shipped back to the Tacoma Division. This would reduce the yearly savings on all the ties tributary to the Seattle plant on the basis of an average No.4 tie from \$267,124 to \$254,232, or a difference of \$12,892. I stressed the fact that the results obtainable from Paradise plant operations in a more pronounced degree than ten years ago provides the plane of reference for contract cost comparisons. The proposal from every phase of comparison is more favorable than the contract commitment of ten years ago.

LY:m  
encl.

L. YAGER,

Statement A

NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ESTIMATES OF COSTS TO THE CONTRACTOR FOR TREATING CROSS TIES UNDER PROPOSED NEW CONTRACT AT SEATTLE FOR THE NUMBER OF TIES REQUIRED FOR 10 YEAR PERIOD AS OUTLINED IN STATEMENT No. 10, SEPTEMBER 10, 1936. (PARAGRAPH 5).

Contract price \$6.25 per M for complete treatment is equivalent to \$.2331 per tie (7x8-8'). Assume average of 200,000 ties per year.

(A) DIRECTLY ASSIGNABLE ITEMS

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - Steam, power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and Supplies, track and bldg. maintenance	<u>.02385</u>
Sub total	\$.09635

(B) DIRECTLY ASSIGNABLE TAXES

1. State Ind. Tax and Workmans Compensation \$.0215 per hr	\$.0017
2. Federal Social Security Act 2.1% of Labor	.0011
3. Business and Occupational Tax 1/4% Gross Business	<u>.0008</u>
Sub total	\$.0036

(C) GENERAL OVERHEAD ETC.

1. General and Plant Supervision	\$.0180
2. Taxes on plant	.0180
3. Insurance on plant	<u>.0020</u>
Sub total	\$.0380

(D) OVERHEAD-INVESTMENT COSTS (Interest 6%, Depreciation 5%)

1. Amortization of plant \$300,000 in 20 years	\$.07500
2. Interest on Investment \$300,000 @ 6%	<u>.04324</u>
Sub total	\$.11824



(E) OVERHEAD-INVESTMENT COSTS (Interest 5%, Depreciation 3%)

1. Amortization of plant	\$300,000 in 33 years	\$.045000
2. Interest on Investment	\$300,000 @ 5%	.042375
	Sub total	\$.087375

SUMMARY (Interest 6%, Depreciation 5%)

(A) Directly Assignable Items	\$.09635
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.03800
(D) Overhead-Investment Costs	.11824
	Total Costs \$.25619
	Payments received .23310
	Loss \$.02309
	Loss per cent of cost 9.02%

SUMMARY (Interest 5%, Depreciation 3%)

(A) Directly Assignable Items	\$.09635
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.03800
(E) Overhead-Investment Costs	.08738
	Total Costs \$.22533
	Payments received .2331
	Profit \$.00777
	Profit percent of cost .34%

Note: In each case the first ten years' interest and amortization charges are allocated to the first ten year period ending December 31, 1936.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936.

Statement A-1

NORTHERN PACIFIC RAILWAY COMPANY

ESTIMATED SEGREGATION OF COSTS TO CONTRACTOR ON TREATING MATERIAL AT SEATTLE PLANT, FOR CROSS TIES ONLY. BASED ON AVERAGE OF 300,000 PCS. 7 x 8 - 8' TIE EQUIVALENTS. THIS IS A RESTATEMENT OF STATEMENT No. 6, SEPTEMBER 17, 1936 FOR DIFFERENT BASES OF AMORTIZATION AND INTEREST CHARGES (Paragraph 6).

Contract price \$6.50 per M for 12 hr. treatment is equivalent to \$.243 per tie (7x8-8').

Actual price paid contractor for treatment of all cross ties to August 1, 1936 was \$.2600 per tie covering all additional charges for overtime.

(A) DIRECTLY ASSIGNABLE ITEMS

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - Steam, power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and supplies, track and bldg. maintenance	.01590
Sub total	\$.08840

(B) DIRECTLY ASSIGNABLE TAXES

1. State Ind. Tax and Workmen's Compensation \$.0215 per hr	.0017
2. Federal Social Security Act 2.1% of Labor	.0011
3. Business and Occupational Tax 1/4% on Gross Business	.0008
Sub total	\$.0036

(C) GENERAL OVERHEAD ETC.

1. General and Plant Supervision	\$.0120
2. Taxes on plant	.0120
3. Insurance on Plant	.0010
Sub total	\$.0250

(D) OVERHEAD-INVESTMENT COSTS (Interest 6%, Depreciation 10%)

1. Amortization of plant \$ 300,000 in 10 years	\$.1000
2. Interest on Investment \$ 300,000 @ 6%	.0330
Sub total	\$.1330



(E) OVERHEAD-INVESTMENT COSTS (Interest 6%, Depreciation 5%)

1. Amortization of plant	\$300,000 in 20 years	\$.05000
2. Interest on Investment	\$300,000 @ 6%	.04815
	Sub total	\$.09815

(F) OVERHEAD-INVESTMENT COSTS (Interest 5%, Depreciation 3%)

1. Amortization of plant	\$300,000 in 33 years	\$.03000
2. Interest on Investment	\$300,000 @ 5%	.04325
	Sub total	\$.07325

SUMMARY (Interest 6%, Depreciation 10%)

(A) Directly Assignable Items	\$.08840
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.02500
(D) Overhead - Investment Costs	<u>.13300</u>
Total Costs	\$.25000
Payments received	<u>.26000</u>
Profit	\$.01000
Profit Per cent of Total Cost	4%

SUMMARY (Interest 6%, Depreciation 5%)

(A) Directly Assignable Items	\$ .08840
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.02500
(E) Overhead - Investment Costs	<u>.09815</u>
Total Costs	\$ .21515
Payments received	<u>.26000</u>
Profit	\$ .04485
Profit Per cent of Total Cost	20.8%

SUMMARY (Interest 5%, Depreciation 3%)

(A) Directly Assignable Items	\$ .08840
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.02500
(F) Overhead - Investment Costs	<u>.07325</u>
Total Costs	\$ .19025
Payments received	<u>.26000</u>
Profit	\$ .06975
Profit Per cent of Total Cost	36.6%

Note - In each case the first ten years' interest and amortization charges are allocated to the period in question, namely ten year period ending December 31, 1936.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936.



Statement B

NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ESTIMATES OF TOTAL PROFIT TO THE CONTRACTOR FOR TREATING N. P. MATERIAL UNDER EXISTING AND PROPOSED CONTRACTS. (Paragraph 7).

(A) PROFITS UNDER PRESENT CONTRACT EXPIRING DECEMBER 31, 1936.

1. Based on Interest 6%, Depreciation 10% of \$300,000 Investment

(a) Profit on Cross ties	2,858,514 pcs. @ 1¢	\$28,585
(b) Profit on Switch ties	8,661 M FEM @ \$1.29	11,172
(c) Profit on Lumber and Piling	6,740 M FEM @ \$4.47	30,128
Total		\$69,885
Profit per year		\$ 6,988

2. Based on Interest 6%, Depreciation 5% of \$300,000 Investment

(a) Profit on Cross ties	2,858,514 pcs @ \$.04485	\$128,204
(b) Profit on Switch ties	8,661 M FEM @ \$2.32	20,093
(c) Profit on Lumber and Piling	6,740 M FEM @ \$5.40	36,396
Total		\$184,693
Profit per year		\$ 18,469

3. Based on Interest 5%, Depreciation 3% of \$300,000 Investment

(a) Profit on Cross ties	2,858,514 pcs. @ \$.06975	\$199,381
(b) Profit on Switch ties	8,661 M @ \$2.98	25,809
(c) Profit on Lumber and Piling	6,740 M @ \$6.06	40,844
Total		\$266,034
Profit per year		\$ 26,603

(B) PROFIT UNDER PROPOSED CONTRACT - AMOUNT OF MATERIAL STATEMENT No.10

1. Based on Interest 6%, Depreciation 5% of \$300,000 Investment

(a) Loss on Cross ties	1,997,000 @ \$.02309	\$46,116
(b) Profit on Switch ties	5,000 M @ \$2.79	13,950
(c) Profit on Lumber and Piling	6,000 M @ \$5.49	32,940
Total		\$ 774
Profit per year		\$ 77.40

2. Based on Interest @ 5%, Depreciation 3% of \$300,000 Investment

(a) Profit on Cross Ties	1,997,000 @ \$.00777	\$15,515
(b) Profit on Switch ties	5,000 M @ \$2.79	13,950
(c) Profit on Lumber and Piling	6,000 M @ \$5.32	37,920
Total		\$67,385
Profit per year		\$ 6,738

Note: Under heading (B) Profits under proposed contract the Overhead - Investment Costs have all been absorbed by the item cross ties (Statement A) because the data on probable use of switch ties, timber and piling for the ten-year period is more indefinite than on cross ties; the net result, however, would be the same as though these charges had been spread uniformly over all the product. The divisions of profit as accruing to switch ties, lumber and piling are, in the absence of data on unit handling costs, interpolated from cross tie costs and are therefore not accurate or reliable.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 27, 1936.



# NORTHERN PACIFIC RAILWAY COMPANY

## Statement C

APPROXIMATE RESULTS TO GREAT NORTHERN AND NATIONAL POLE AND TREATING COMPANY  
OPERATING UNDER FIVE YEAR CONTRACT DATED JUNE 1, 1936, EFFECTIVE MAY 1, 1937.

This is a restatement of Statement No. 13, dated Sept. 17, 1936 (Paragraph 9).

### (A) RESULTS TO GREAT NORTHERN BASED ON AVERAGE TIE 7x8-8'

<u>Costs to Great Northern</u>	<u>Per Tie</u>
1. Taxes on plant	\$.0120
2. Insurance on plant	.0010
3. State Industrial Tax and Workmen's Compensation	.0017
4. Federal Security Tax and Business and Occupational Tax	.0019
5. Total Taxes	\$.0166
6. Contract payment @ \$8.96 per M FBM	.3319
7. Total Cost Taxes and Contract unit prices	\$.3485
8. G. N. Plant Investment \$500,000 @ 5%, average \$12,625	.0243
9. G. N. Plant Amortization \$500,000 @ 3% = \$15,000	.0264
10. G. N. Grand Total Cost	\$.3992
11. Credit Rental received \$35,000	.0622
12. Net Cost to Great Northern	\$.3370
13. N. P. Cost, Seattle (new contract)	.2331
Increased Cost to Great Northern	\$.1039
Increase	44.56%

### (B) RESULTS TO CONTRACTOR

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel, steam and power	.02000
7. Plant labor, operation and repairs	.02100
8. Material and supplies	.01500
9. Maintenance of yard tracks 6 miles, \$3500	.00311
10. Total Direct Costs	\$.09061
11. Interest and Depreciation on cranes and locomotives \$60,000 @ 10% = \$6,000	.01639
12. General and Plant Supervision \$22,000	.03888
13. Sub total	\$.14588
14. Rental payment to Great Northern \$35,000	.06220
15. Grand Total Cost to Contractor	\$.20808
16. Received from G. N. @ \$8.96 per M FBM	.33190
Profit	\$.12382
Profit percentage of Total Cost	59.48%

Asst. Chief Engineer  
St. Paul, Minnesota  
October 26, 1936.

Statement D

NORTHERN PACIFIC RAILWAY COMPANY

COMPARISON OF AVERAGE YEARLY COSTS FOR DOMESTIC AND FOREIGN CREOSOTE; COMPUTED ON BASIS OF CREOSOTE COSTS DELIVERED IN STORAGE TANKS AT SEATTLE PLANT MIXTURE TREATMENT 45% CREOSOTE, 55% PETROLEUM. AVERAGE TIE REQUIRES 1.35 GAL. CREOSOTE, 1.65 GAL. PETROLEUM. (Statement No. 7). (Paragraph #12).

1. Treating 300,000 pcs. Cross ties @ 1.35 gals. Domestic @ \$.15123	\$61,248
2. Treating 300,000 pcs. Cross ties @ 1.35 gals. Foreign @ \$.1326	53,703
3. Increased Cost Domestic Creosote	\$ 7,545
4. Increased Cost Domestic Creosote based on treating 200,000 pcs. Cross ties	\$ 5,030
5. Increased Cost Domestic Creosote based on treating 100,000 pcs. Cross ties	\$ 2,515
6. Increased Cost Domestic Creosote per M FEM	\$ .674
7. Increased Cost Domestic Creosote per Average Tie	\$ .02515
8. Approximate Total Increased Cost of using Domestic Creosote on estimated total forest products for ten-year period (Statement No. 10, September 10, 1936)	\$57,664

Asst. Chief Engineer  
St. Paul, Minnesota  
October 22, 1936.



NORTHERN PACIFIC RAILWAY COMPANY

ABSTRACT OF SOME ORDERS PLACED BY THE A. T. & S. F. RY. CO. DURING JANUARY 1936 FOR DELIVERY OF CREOSOTE TO THEIR SPECIFICATIONS DATED SEPT. 29, 1931. THIS SPECIFIES A MAXIMUM RESIDUE OF 20% ABOVE 355° CENTIGRADE.

1. Order placed 1-18-36 with Bernath Lemcke, foreign creosote oil  
1,000,000 gallons delivered into storage tanks at  
National City, near San Diego, California @ \$.1390 per gallon
2. Order placed 1-18-36 with Barrett Company, Chicago, for  
1,000,000 gallons delivered into storage tanks at  
Galveston, Texas, domestic creosote @ \$.12886 per gallon
3. Order placed with Rilly Tar & Chemical Company, Chicago,  
500,000 gallons domestic creosote delivered into Santa Fe  
tank cars, f.o.b. Corinth, Illinois @ \$.13021 per gallon
4. Order placed 1-18-36 with Inland Tar Company, Chicago,  
500,000 gallons domestic creosote into Santa Fe tank  
cars at Corinth, Illinois @ \$.13059 per gallon
5. Order placed 1-18-36 with Colorado Fuel & Iron Company, Chicago,  
160,000 gallons domestic creosote into Santa Fe tank cars  
at Minequa, Colorado @ \$.1325 per gallon.

Note: No prices taken for 1937 requirements.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY SYSTEM

Chicago, Sept. 24, 1936.

Mr. L. Yager  
Asst. Chief Engineer  
Northern Pacific Railway Co.  
St. Paul, Minnesota

Dear Mr. Yager:

Yours of September 22nd:

Prior to 1931, except during the World War, we used foreign creosote at Somerville and National City. This was delivered by boat to Galveston for the Somerville plant and by boat to San Diego for National City. From 1931 to date, we quit buying foreign oil for use at Somerville and have purchased this requirement from domestic producers on the Atlantic Coast, delivered by boat to Galveston. With the exception of a cargo of domestic creosote delivered by boat to National City in 1933, all of the creosote used at that plant has been imported. On account of subnormal requirements, we did not require any creosote deliveries at National City from 1933 until the spring of 1936 and the requirements furnished this year were foreign oil.

Yours very truly,

(Signed) G. W. Harris

C O P Y



Statement E

## NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ANNUAL COST COMPARISONS OF TREATED AND UNTREATED CROSS TIES. BASED ON COAST DOUGLAS FIR TREATED AT SEATTLE UNDER PROPOSED CONTRACT. AVERAGE TIE LIFE TAKEN FROM ACTUAL AND PROJECTED TEST TRACK DATA (Paragraph 16).

(A) UNIT COSTS OF TIES

	<u>Untreated Ties</u>		<u>Treated Ties</u>	
	<u>No. 4</u>	<u>No. 5</u>	<u>No. 4</u>	<u>No. 5</u>
1. Purchase Price @ \$12.00 M	\$.4480	\$.5355		
2. Sales Tax 2% on 75%	.0067	.0080		
3. Haul on ties @ \$.003	.0278	.0333		
4. Cost of tie, treatment and hauls			\$.9908	\$1.1812
5. Total Cost of ties	\$.4825	\$.5768	\$.9908	\$1.1812
6. Cost of placing tie in track	.4000	.4000	.4000	.4000
7. Total Cost of ties in place	\$.8825	\$.9768	\$1.3908	\$1.5812
8. Average Cost per year 8 year untreated, 25 years treated	\$.1103	\$.1221	\$.0556	\$.0632
9. Increased cost	\$.0547	\$.0589		
10. Increased cost %	98.4%	93.1%		
11. Average cost per year untreated 20 years treated	\$.1103	\$.1221	\$.0695	\$.0740
12. Increased cost	\$.0408	\$.0481		
13. Increased cost Percent	58.7%	65.0%		

(B) APPROXIMATE COST COMPARISONS - TRACK MILES AND DISTRICTS

1. Standard Main Track 24 No. 5 ties per panel = 3250 per mile
2. No. 4 Tie 7x8-8' assumed to be the average tie size for average of all tracks.
3. Annual cost untreated Douglas fir No. 4 tie in place assumed @ \$.8825 for 8 year average life = \$.1103
4. Annual cost of untreated Douglas fir No. 5 tie in place assumed @ \$.9768 for 8 year average life = \$.1221
5. Annual cost of treated Douglas fir No. 4 tie in place assumed @ \$1.3908 for 25 year average life = \$.0556
6. Annual cost of treated Douglas fir No. 4 tie in place assumed @ \$1.3908 for 20 year average life = \$.0695
7. Annual cost of treated Douglas fir No. 5 tie in place assumed @ \$1.5812 for 25 year average life = \$.0632
8. Annual cost of treated Douglas fir No. 5 tie in place assumed @ \$1.5812 for 20 year average life = \$.0740

(a) Comparisons for 1 mile Standard Main Line Track

1. Decreased cost for No. 5 treated ties average life 25 years =  
(\$1.221 - \$.0632 = \$.0589) x 3250 \$191.47
2. Decreased cost for No. 5 treated ties average life 20 years =  
(\$1.221 - \$.0740 = \$.0481) x 3249 \$156.33
3. Decreased cost Main Line track Tacoma Div. 25 year life =  
563 miles x \$191.47 \$107,798
4. Decreased cost Main Line track Tacoma Div. 20 year life =  
563 miles x \$156.33 \$88,014

(b) Comparisons for all tracks Tacoma Div. (Seattle Plant) No. 4 Average Tie

- |  |           |
|--|-----------|
| 1. Decreased cost No. 4 treated tie average life 25 years =<br>(\$ .1103 - \$.0556 = \$.0547) x 4,883,448 ties = | \$267,125 |
| 2. Decreased cost No. 4 treated tie average life 20 years =<br>(\$ .1103 - \$.0695 = \$.0408) x 4,883,448 ties = | \$199,245 |

(c) Comparisons for all tracks territory tributary to Paradise Plant  
3655 track miles 9,961,324 ties No. 4 average tie same cost as (b)

- |   |           |
|---|-----------|
| 1. Decreased cost No. 4 treated tie average life 25 years =<br>(\$ .1103 - \$.0556 = \$.0547) x 9,961,324 = | \$544,884 |
| 2. Decreased cost No. 4 treated tie average life 20 years =<br>(\$ .1103 - \$.0695 = \$.0408) x 9,961,324 = | \$406,422 |

(d) Comparisons for all tracks territory tributary to Brainerd Plant  
4230 track miles 11,431,548 No. 4 average tie same cost as (b)

- |  |           |
|--|-----------|
| 1. Decreased cost No. 4 treated tie average life 25 years =<br>(\$ .1103 - \$.0556 = \$.0547) x 11,431,548 = | \$625,306 |
| 2. Decreased cost No. 4 treated tie average life 20 years =<br>(\$ .1103 - \$.0695 = \$.0408) x 11,431,548 = | \$466,407 |

(e) Comparisons resulting from using untreated ties throughout in the future.  
Based on average No. 4 tie. Average renewal rates 8 year life 12½%, 20 year life 5%, 25 year life 4%.

- |   |  |           |
|---|--|-----------|
| 1. Decreased costs per year for all tracks tributary to<br>Seattle Plant for average life 25 years =<br>4% of 4,883,448 = 195338 x (\$1.3908 - \$.8825 = \$.5083) =   |  | \$ 99,290 |
| 2. Decreased costs per year for all tracks tributary to<br>Seattle Plant for average life 20 years =<br>5% of 4,883,448 = 244172 x (\$1.3908 - \$.8825 = \$.5083) =   |  | \$124,113 |
| 3. Decreased costs per year for all tracks tributary to<br>Paradise Plant for average life 25 years =<br>4% of 9,961,324 = 398453 x (\$1.3908 - \$.8825 = \$.5083) =  |  | \$202,534 |
| 4. Decreased costs per year for all tracks tributary to<br>Paradise Plant for average life 20 years =<br>5% of 9,961,324 = 498066 x (\$1.3908 - \$.8825 = \$.5083) =  |  | \$253,167 |
| 5. Decreased costs per year for all tracks tributary to<br>Brainerd Plant for average life 25 years =<br>4% of 11,431,548 = 457262 x (\$1.3908 - \$.8825 = \$.5083) = |  | \$232,426 |
| 6. Decreased costs per year for all tracks tributary to<br>Brainerd Plant for average life 20 years =<br>5% of 11,431,548 = 571577 x (1.3908 - \$.8825 = \$.5083) =   |  | \$290,533 |



SUMMARY (A) RESULTS BASED ON CONTINUED USE OF TREATED TIES

	Miles Track	Renewals per Year			Decreased Costs Average Life Treated Ties	
		Untreated	Treated	Treated	25 years	20 years
			25 yrs.	20 yrs.		
1. Seattle Plant	1828	610,431	195,338	244,172	\$267,125	\$199,245
2. Paradise Plant	3655	1,245,166	398,453	498,066	544,884	406,422
3. Brainerd Plant	4230	1,428,943	457,262	571,577	625,306	466,407
4. Totals	9713	3,284,540	1,051,053	1,313,815	\$1,437,315	\$1,072,074

Note: Cost of total system ties only average No. 4 7x8-8' untreated  
 @ \$.4425 x 3,284,540 = \$1,453,409; for 25 year life No. 4  
 treated ties @ \$.9908 x 1,051,053 = \$1,041,383; for 20 year  
 treated life = \$.9908 x 1,313,815 = \$1,301,728.

SUMMARY (B) RESULTS BASED ON REVERSION TO USE OF UNTREATED TIES

	Miles Track	Yearly Tie Renewals		Decreased Costs Average Life Treated Ties	
		25 Year Life	20 Year Life	25 years	20 years
1. Seattle Plant	1,828	195,338	244,172	\$ 99,290	\$124,113
2. Paradise Plant	3,655	398,453	498,066	202,534	253,167
3. Brainerd Plant	4,230	457,262	571,577	232,426	290,533
4. Total	9,713	1,051,053	1,313,815	\$ 534,250	\$667,813

Note: The figures for annual renewals and decreased costs under Summary (B) reversion to use of untreated ties would hold approximately for the first 8 year period after which this cycle would require progressive renewals at a rate of 12 1/2% because we are dealing with average life periods. After the first 8 year period there would still be 17 years of treated ties to be renewed showing the same results by 8 year periods but the untreated tie renewal costs of the first 8 year period repeated would eventually wipe out the apparent costs. In order to avoid the vast amount of work required to take into consideration the effect of differences in cost of ties and treatment as well as the differences in average life of ties we have projected the results for the system from the differences disclosed by the Seattle Plant. These foregoing rough assumptions explain to some extent the differences between the predicted tie renewals and the actual renewals made in recent years.

Statement E-1

NORTHERN PACIFIC RAILWAY COMPANY

COMPARATIVE ANNUAL COST OF UNTREATED AND TREATED No. 5 COAST DOUGLAS FIR TIES. BASED ON TREATING COSTS UNDER PROPOSED CONTRACT AT SEATTLE.

	<u>Untreated</u>	<u>Treated</u>
Total Cost in Place	<u>\$9.9768</u>	<u>\$1.5812</u>

Average Years Life

Cost per Year

1	.9768	1.5812
2	.4884	.7906
3	.3256	.5271
4	.2442	.3953
5	.1954	.3162
6	.1628	.2635
7	.1395	.2259
8	.1221(a)	.1977
9	.1085(b)	.1757
10	.0977(c)	.1581
11	.0888	.1437
12	.0814	.1318
13	.0751	.1216(a)'
14	.0666	.1129
15	.0651	.1054(b)'
16	.0610	.0988(c)'
17	.0515	.0930
18		.0878
19		.0832
20		.0791
21		.0753
22		.0719
23		.0687
24		.0659
25		.0632
26		.0608
27		.0586
28		.0565
29		.0545
30		.0527

Note: (a) average yearly cost of untreated tie 8-year average life gives same average annual cost of treated tie lasting 13 years (a'). (b) 9 years same as (b') 15 years. (c) 10 years same as (c') 16 years.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936.



## NORTHERN PACIFIC RAILWAY COMPANY

## COMPARATIVE ANNUAL COSTS OF UNTREATED No. 5 COAST DOUGLAS FIR TIES AND TREATED TIES OF VARIABLE TREATMENT COSTS.

	Untreated Cost	Treatment @ \$6.25 M	Treatment @ \$6.00 M	Treatment @ \$5.50 M	Treatment @ \$5.00 M
Total Cost in Place	\$ .9763	\$1.5812	\$1.5700	\$1.5477	\$1.5254
Average Years Life	Costs per Year				
5	.1954	.3162	.3140	.3095	.3051
6	.1628	.2635	.2616	.2579	.2542
7	.1395	.2259	.2243	.2211	.2179
8	.1221(a)	.1977	.1962	.1935	.1907
9	.1065	.1757(b)	.1744(b)	.1720(b)	.1695(b)
10	.0977	.1581	.1570	.1548	.1525
11	.0888	.1437	.1427	.1407	.1387
12	.0814	.1318	.1306	.1290	.1271
13	.0751	.1216(a)	.1208(a)	.1191(a)	.1173(a)
14	.0666	.1129	.1121	.1105	.1090
15	.0651	.1054	.1047	.1032	.1017
16	.0610	.0988	.0981	.0967	.0953
17	.0516	.0930	.0924	.0910	.0897
18		.0878	.0872	.0860	.0847
19		.0832	.0826	.0815	.0803
20		.0791	.0785	.0774	.0763
21		.0753	.0748	.0737	.0726
22		.0719	.0714	.0703	.0693
23		.0687	.0683	.0673	.0663
24		.0659	.0654	.0645	.0636
25		.0632	.0628	.0619	.0610
26		.0608	.0604	.0595	.0587
27		.0586	.0581	.0574	.0565
28		.0565	.0561	.0553	.0545
29		.0545	.0541	.0534	.0526
30		.0527	.0523	.0516	.0508

- Cost per main track mile per year untreated No. 5 tie average life  
8 years  $3250 \times \$ .1221$  \$396.83
- Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost @ \$6.25 per M  
 $3250 \times \$ .0632$  \$205.40
- Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost @ \$6.00 per M  
 $3250 \times \$ .0628$  \$204.10
- Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost \$5.50 per M  
 $3250 \times \$ .0619$  \$201.18
- Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost \$5.00 per M  
 $3250 \times \$ .061$  \$198.25

Asst. Chief Engr.

St. Paul, Oct. 27, 1936

## NORTHERN PACIFIC RAILWAY COMPANY

ESTIMATED VALUE OF TREATED TIE PROTECTION THROUGH ADEQUATE TIE PLATES TO INCREASE AVERAGE LIFE FROM 20 YEARS to 25 YEARS. TREATING COST TAKEN AT \$6.25 per M. COST OF No. 5 TREATED DOUGLAS FIR TIE IN PLACE \$1.5812.

1. Annual Cost mile main track No. 5 tie average life 20 years	
3250 x \$.0791	\$257.08
2. Annual Cost mile main track No. 5 tie average life 25 years	
3250 x \$.0632	<u>\$205.40</u>
3. Difference	\$ 51.68
4. Value difference @ 5% = 51.68 x 20 =	\$1033.60
5. Cost tie plates 7 x 9 - 1 mile = 3250 x 2 = 6500	
6500 x 8.68¢ = 56420¢ = 28.21 tons @ \$45.00	\$1269.45
6. Cost tie plates 7-1/2 x 10-7/8 - 1 mile = 3250 x 2 =	
6500 6500 x 12.8¢ = 83200¢ = 41.6 tons @ \$45.00	\$1872.00
7. Difference Increase	\$602.55
8. Saving \$51.68 per year on \$602.55 increased cost =	8.5%

Aast. Chief Engineer  
St. Paul, Minnesota  
October 27, 1936



St. Paul, Minnesota  
October 28, 1936.

Mr. Bernard Blum:

Referring to your request for data to make direct replies to the sixteen questions raised in Mr. Stevens' letter of October 16th on the contract proposal for continuation of forest products treatment at Seattle with the West Coast Wood Preserving Company:

In my letter of September 25th I did not cover all the details of the discussions resulting from three or four days' conferences with Mr. Horrocks, but confined myself to those apparently more important phases and outlined certain conclusions dictated by the evidence. In order to now provide data for specific answers to these later questions it will be necessary to repeat and amplify previous statements in addition to carrying the review into phases not originally contemplated.

Mr. H. E. Horrocks, an engineer by training, was formerly the manager of the Pacific Coast Creosoting Company and since the consolidation of the Colman Company and the Pacific Coast Creosoting Company into the West Coast Wood Preserving Company has been the manager of that concern. Mr. Horrocks is a frank, fair-minded type of business man not given to bluffing and indulging in those forms of maneuvering so often encountered in jockeying for a position in horse trading transactions. The whole affair has been a candid discussion of a business relation to develop mutually advantageous arrangements. By reason of Mr. Horrocks' frank and fair attitude in the interpretation of contract provisions the operation of this contract has been even more satisfactory to us than were the relations with the Colman officers, and we know that the contract has likewise been profitable to the contractor. Mr. Horrocks is desirous of continuing these contract relations if mutually agreeable terms can be agreed upon. Sometime after the West Coast Company took over the operation of the Colman plant we approached Mr. Horrocks for a readjustment of some of the schedule provisions in the original contract which never were altogether satisfactory but nothing could be done about it with either Mr. Doan or Mr. Colman. After some negotiations certain revisions were made in price schedules covered by supplementary agreement February 24, 1933, effective as of December 1, 1932. In making these statements about the fair attitude of Mr. Horrocks I desire not to be misunderstood as in any way inferring that Mr. Horrocks does not have a keen insight into all of those features which affect the interests of his employer. He has a broad and clear conception of all those matters dealing with timber preservation in his territory and is familiar with the prices charged by his competitors, both in the railroad and commercial markets. He is not overlooking any opportunities to protect the interests of his concern. When we discussed this subject in general terms before I went to the Coast it was well understood that I would endeavor to develop all the possibilities of a favorable

Mr. Bernard Blum - 2  
October 28th, 1936 .

contract on the basis of discussing the merits of any proposal that might arise. It was clear that for these first contacts, at least, there should be no arbitrary proposal on our part based on a "take it or leave it" attitude. That, however, did not foreclose taking that position at a later time if it should be concluded that the circumstances warrant that course of action without incurring unfavorable repercussions.

(1) Statement No. 6 is an estimated segregation of costs to the contractor for treating cross ties only for the ten-year period as stated. These unit costs are estimated from our own experience because most of the operations are very similar to our own, and Mr. Hopkins, through his years of contact with the plant, was able to observe the operations carefully for the determination of their costs and likewise had considerable information on the rates of pay. Treatment of cross ties is a rather typical illustration of mass production affording many opportunities for close estimates of unit costs. These estimates manifestly are not presented as accurate but they are sufficiently reliable for any purpose to which we might devote them. This statement was prepared not only for its incidental value in connection with any discussions which Mr. Horrocks might permit with respect to the result to his company of their participation in the contract, but also to have something available as a likely measure of costs in connection with the possibilities of any other concerns offering to construct a new treating plant for the purpose of taking on Northern Pacific business in connection with commercial treating business.

(2) The figure of \$300,000 represents our estimate which we think is fairly accurate of the total investment of the contractor in facilities added to his original plant for the purpose of handling our contract. In dealing with this subject we are immediately confronted with making a decision as to how to dispose of the annual charges related to the created investment. Individuals may properly differ as to how these charges should be spread but there can be no questioning the conclusions that these charges in a solvent business must eventually be absorbed in the product purchased by the consumer. It is this important annual investment charge which stood in the way of constructing our own plant when this subject was considered in 1926, and is still the barrier to the construction of a plant on the Coast for the purpose of realizing those economic advantages resulting from the ownership and operation of our own plants. The set-up in No. 6 is obviously the extreme case and could only be justified on the assumption that the original contractor could not anticipate the continuation of the contract relations with the Northern Pacific or any other party. If that statement of facts could be demonstrated to the taxing authorities, then the contractor would undoubtedly be permitted to show a 10% depreciation of his investment in his income tax returns. As the matter now stands the contractor will be allowed a depreciation rate which the taxing authorities already have approved for that type of business, and



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it is safe to say this is considerably less than 10%, because the contractor can not, or more properly putting the case, does not intend to show that this facility will no longer be devoted to the purpose for which it was created. In case there were no future contract relations the contractor would have a plant free of cost for conversion to other purposes or disposition for its salvage value.

As is well understood, the item of depreciation relates more particularly to the possibility of obsolescence because satisfactory operating condition of the plant is usually maintained by current repairs. A contractor is concerned in obsolescence by reason of a possible change in treating methods or for the disappearance of railroad contract work by reason of the change in the railroad practice or the appearance of additional commercial competitors in the field for such business as may be offered. All of these phases of the subject were discussed in considerable detail with Mr. Horrocks but the conclusions could not be capitalized because Mr. Horrocks made it clear that he had not assumed and did not see any reason to justify assuming any obligations to enter into a contract to treat material for us at cost plus a pre-determined rate of profit. That is a logical position because we were likewise not in a position to assume the necessary obligations on our part with respect to that type of contract relationship. Mr. Horrocks desires to maintain future relations on contract provisions which are mutually satisfactory predicated upon the competitive conditions as determined by the commercial market or the costs determined by the operation of our own plants. That fact places all of these calculations and assumptions in the category of an academic discussion. I have restated Statement No. 6 in Statement A-1 to show the results for different assumed bases for amortization and interest charges.

In 1926 we had proposals, one from the Long Bell Lumber Company and another from the National Lumber & Creosoting Company based on a guaranteed volume  $2\frac{1}{2}$  times that which we were able to offer. Their proposals were considerably higher than the Colman Company, undoubtedly largely due to the fact that the Colman Company's additional investment was for the enlargement of an existing plant, whereas the other companies would have to create complete new facilities at a considerably greater cost. The other proposals were withdrawn when the minimum stipulations could not be met. In view of the past history it must be evident that the West Coast Company will be at a decided advantage in a competitive situation in the event competition is offered through the construction of a new plant on the Coast. Mr. Horrocks is not intending to sacrifice this or any other advantage which his company may possess, and as I have previously stated, there is no apparent intention of unnecessarily depressing unit treating prices. Mr. Horrocks stated that his prices were already considerably below the existing level and he was not interested in taking on business with the uncertainties in volume at a rate lower than outlined in the proposal. I think it proper to state here that the present general level of treating prices was largely influenced originally by the contract with the Milwaukee because the Eagle Harbor plant has no

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seasoning storage facilities and the Milwaukee were not inclined to assume the carrying charges on seasoning ties for the purpose of realizing a greater economic tie life obtainable from treated air-seasoned ties so that the contractor found it necessary to make a treating rate which eliminated the usual charges for cylinder time involved in treating green material.

(3) Section C, Statement No. 6, shows an interest rate at 6% on \$300,000. The charges are figured in succeeding years on the depreciated principal so that the total interest charge is \$99,000 for the ten-year period instead of \$180,000 which would be the figure if straight interest were computed throughout the ten-year period.

(4) This has been practically covered by the discussion under No. 2. Statement A attached, which is a restatement of Statement No. 6, under the last grouping, shows the investment costs at an interest rate of 5% and depreciation rate of 3%.

(5) Statement A is similar to Statement No. 6 in showing the probable results for the second ten-year period for the material as outlined in Statement No. 10 using the rate for cross ties set up in the proposal and is based on an average of 200,000 ties per year. In view of the fact that our probable use of material other than cross ties is still more uncertain than the probable cross tie requirements, I have absorbed the investment costs in the tie treatment set-up. By reason of the fact that certain more or less fixed operating costs are involved and that the annual investment costs are all absorbed by the ties, this statement shows on the basis of 6% interest and depreciation of 5%, the operation predicts a loss of \$.02309 per tie or 9.02%. This merely means that if the contractor handled nothing but cross ties he would not realize the estimated investment costs but he would still show some rate of return on the investment. In the set-up where interest is taken at 5% and depreciation at 3% there is a profit of \$.00777 per tie or .34%.

(6) Statement No. 6, as explained, deals only with cross ties for which we have fairly reliable cost data on all the plant operations that are involved. We do not have such comparable data on the handling of switch ties, lumber and piling. The costs of handling lumber and piling are quite variable, depending upon the character of the material and the amounts handled. It would be possible, of course, at considerable effort to obtain a fairly reliable prediction on these items, but that would take a long time and the results under the circumstances would add little or nothing in the way of determinative value in the appraisal of the situation. By means of interpolation I have estimated the probable profits on these items as shown in Statement B. It is, therefore, not proper to apply the 4% against the item of \$825,677 shown in Statement No. 11.



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(7) Statement B is a set-up of the probable profits to the contractor under the present contract, Sub-division A, and under Sub-division B likewise the probable profits under the proposed contract for the amount of material covered by Statement No. 10. These set-ups take into consideration two bases for the disposition of the investment costs. The probable profits shown under Sub-division B are, even with the uncertainties, rather modest for operations in that industry. On the same basis the Great Northern contract at Hillyard, effective May 1, 1937, promises to return to the contractor a profit of about \$70,000 per year if the output is all confined to cross ties, and a considerably larger profit if any material portion of the business is out-put other than cross ties. It should be stated, however, that the yearly volume of business to be offered by the Great Northern under their contract is about 2.4 that estimated for our own needs on Statement No. 10. The \$70,000 mentioned above relates to the Great Northern business and no attempt has been made to estimate the profits on commercial business.

(8) We do not have a copy of contract between the West Coast Company and the Milwaukee Company. It is our understanding that there is no term contract. There is an understanding which continues from year to year. We know that the Milwaukee price for treating cross ties is \$6.25 per thousand, and that is the same rate as outlined in the new proposal. The new contract draft provides in the event the contractor makes any lower price to any other parties, that lower price immediately becomes effective for the Northern Pacific. I have previously explained that the volume of the Milwaukee business has been greater than that of the Northern Pacific, and is likely to so continue in the future. That fact is undoubtedly one of the controlling reasons why Mr. Horrocks is not inclined to make a lower price to the Northern Pacific because he would undoubtedly be under obligations to make the same concessions to the Milwaukee. The reduction of twenty-five cents per thousand and the operations of the other features of the proposal, as I have stated in the second paragraph of Page 3 of my letter, would mean a reduction of about \$30,000 for the quantities shown on Statement No. 10. The reduction would have been roughly \$43,000 if applied to the material under the present contract shown by Statement No. 8.

(9) Statement No. 9 is a comparison of the unit prices as between the present Northern Pacific contract and the present Great Northern contract of June 1936 and the contract of June 1, 1936, effective May 1, 1937. There is also included an abstract of the contract to show the operation of the rental payments. Statement 9-A shows similarly a comparison of unit prices between the proposed Northern Pacific contract to be dated January 1, 1937 and the existing Great Northern contract and the contract which becomes effective next May. Statement No. 13 is my attempt to show the probable results to the Great Northern and to the contractor of the operation of the contract effective next May. I started out, as explained, by making this a short-cut approach through eliminating the effect of the rental payment because

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it must be obvious that whatever rental payments the contractor makes are either passed immediately back to the Great Northern in the prices for its product or proportionately to the commercial output. I stated that for the purpose of simplicity I have assumed the extreme that the entire rental payments would be absorbed by the Great Northern product. For the purpose of clarification and avoiding any further explanation for the short-cut method, I have restated Statement No. 13 in Statement C, and have followed the presentation through in a logical manner avoiding any short-cuts to the final result which, of course, must be the same in the end. This shows that the Great Northern cost per average tie is \$.1039 greater than the Northern Pacific proposed contract, or practically 45%. The profit to the contractor is shown as \$.12382 per average tie, or practically 60% of his total costs. These comparisons should be made with Statement A showing that the Seattle contractor on the basis of interest at 6%, depreciation 5%, shows a loss of \$.02309, or 9.02%. On a basis of interest at 5%, depreciation 3%, the profit is slightly less than 1% per tie, or .34%. The net cost to the Great Northern for an average tie is \$.337 and to the Northern Pacific under the proposed contract \$.23321.

The Hillyard contract situation by reason of the fine modern type of plant and the large volume of business offered presents a rather unusual set of circumstances for treating ties at a low figure. The Great Northern officers from their own experience in operating treating plant and their knowledge of prices charged commercial plants for railroad work are thoroughly familiar with what are fair and reasonable prices for this work so that the contract is unquestionably based on justifiable grounds. This contract set-up is not presented as being representative of commercial tie treating costs or as necessarily being typical of railroad plants leased to contractors.

Considerable time was devoted to exploring costs of treating ties at commercial plants on the Coast, and in the vicinity of the Twin Cities, for the purpose of determining the reasonableness of the new proposal outlined in the contract draft. Statement No. 14 showed the cost to the S. P. & S. for treatment of ties at Hillyard in 1932 and the treatment in Hillyard and St. Helens, which are competitive for this business, in the year 1936. The treating costs of \$9.50 per thousand at Hillyard in 1932 and \$8.50 at Hillyard and St. Helens in 1936 are to be compared with the \$6.50 per thousand in our present contract, and \$6.25 in the new proposal. The \$8.50 per thousand rate is \$2.25 per thousand higher than the proposal rate and amounts to \$.084 per tie. The higher rate has no doubt mitigated to some extent against the more generous use of treated ties on the S. P. & S. properties. It would be possible to treat S. P. & S. ties at the Seattle plant, using the Northern Pacific source of ties, season them and treat them at Seattle under a treating in transit rate to be established if such a rate does not now exist, and the haul would return to the Northern Pacific and the Great Northern a rate of \$.004 per ton mile as developed from the \$2.25 per thousand increased cost. The out of pocket profit would be the difference



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between the actual ton mile cost and \$.004 per ton mile return. It would be necessary, of course, to handle this business on published tariff rates but the effect of that would be washed out by dividing the haul equally between the two companies. This example is intended merely to illustrate the significance of the difference in contract treating prices. I am well aware of the fact that traffic policy would not permit the adoption of such a plan.

(10) By reason of the somewhat unusual contract at Hillyard I realized that it would be pertinent to obtain whatever information might be available as to the probable volume of the commercial business handled at that plant. I was unable to think of any reason that would justify our asking the Great Northern for the necessary data. That is the only source from which reliable information on this point could be obtained. I pointed out how I had made a very rough approximation of the volume and estimated that this would return a tariff rate of about fifty cents (\$.50) per cwt. and that suggests a gross revenue of \$216,000 per year. In the absence of any information as to what portion of this business is local or long haul and no knowledge as to the origin and destination, it must be obvious that this is a very rough and uncertain estimate.

At the time the present contract was entered into our Traffic Department took a greater interest in the shipments from the Colman plant to determine whether or not we were obtaining our proper share on the haul of competitive commercial business by reason of these contract relations. In the earlier years there was considerable discussion about this phase of the subject and we extended our aid with Mr. Colman at various times to see that our interests in this respect were protected. Having this in mind when I was on the Coast I asked Mr. Burnham whether he had any complaints regarding this matter, and I also talked with members of his staff, and I understood that our Traffic Department were satisfied with the results. Sometime in July Mr. Burnham's office gave me a check on the number of commercial loads for a period of a year. Mr. Hopkins checked this statement from the books of the contractor and that gave rise to Statement No. 12. We did not go to the work of checking up the origin and destination of these cars for the purpose of determining the Northern Pacific divisions of the revenues from an examination of the way bill abstract files. That could be done, but it would take considerable time. If we apply to the Northern Pacific business on Statement No. 12 the same approximate average return per car for all cars, the same as was estimated for Hillyard, we obtain for 1935, 84 cars at \$330, \$27,720; for the first six months of 1936, 96 cars at \$330, \$31,680; or for the 18 months' period ending June 30, 1936, a total of \$59,400. The percentage division of cars as between the four carriers shown on Statement No. 12 is fairly representative of the ten-year period of the existing contract. The output, of course, has varied considerably year by year and during the past year has been picking up to a considerable extent by reason of the increased demand for highway structures in connection with Federal Aid Projects.

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(11) So far as we have been able to learn the Union Pacific never had any of their company material treated at the Seattle plant in the past ten years. All of their company material is treated in their own plant at Dalles, Oregon, leased in recent years to the Forest Products Treating Company of Portland. The Great Northern have had little or no company material treated at this plant in the past ten years. We are certain that no company material has been treated there within the past four or five years. The Milwaukee Company, as you know, have all of their company material treated at the Eagle Harbor plant of the West Coast Company. The Milwaukee barge their material between Seattle and Eagle Harbor. The Union Pacific, Great Northern and the Milwaukee can reach this industry through published tariffs covering treating in transit and that is the reason they participate in this business. The competitive traffic is, of course, subject to routing solicitation. It is estimated that the treating company may influence the routing on anywhere from 25 to 50% of the competitive business. It is the intention of the creosoting company to divide this portion of the business over which they exercise some degree of control equitably between the Northern Pacific and the Milwaukee by reason of their contract relations with these two companies. Mr. Horrocks stated that if the Northern Pacific did not have its material treated at their Seattle plant there would naturally be no incentive for them to have any particular concern in routing any competitive traffic over the Northern Pacific.

(12) On Statement D, I have shown the comparison of average yearly costs for domestic and foreign creosote at Seattle, based first on treating 300,000 cross ties per year, shows an increase of \$7,545; similarly for 200,000 cross ties, \$5,030; and for 100,000 cross ties, \$2,515. The increased cost for domestic creosote over foreign creosote amounts to \$.674 per thousand, or \$.02515 per average tie. The increased cost for using domestic creosote on the total forest products shown by Statement No. 10 would be about \$57,664, or \$5,766 per year.

The item of evaporation and the gain by reason of avoiding the loss of sludge accumulation as previously mentioned must of necessity be small, and it is not susceptible of reliable determination. Our own experience at Brainerd suggests that the sludge loss amounts to possibly one-half of 1% of the creosote cost. This would add roughly \$306 to the treatment of 300,000 ties per year. That calculation, of course, makes no allowance for the difference in residue between the foreign and domestic creosotes.

There is some still undetermined difference in value between the two grades of creosote by reason of residue characteristics. The foreign oil is regarded as having better toxic qualities. It is definitely known that it is easier to obtain the desired absorption with a lighter residue creosote. To obtain the same penetration with the heavier residue creosote requires increased pressures and higher temperatures which has some unknown detrimental effects in treating timber.



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The record of creosoted oils used at the Seattle plant in the interval 1913 to 1932 shows a residue varying from 9.5% to 27%, the average being below 20%. In this statement I am excepting the war period, 1914 to 1917, when foreign oil was not available, and the domestic creosote residue ran as high as 64.65% and generally above 40%. Oil received in 1934 to 1936, European and Japanese creosote, had a residue 12.7% to 17.01%. The Japanese oil was uniformly low in residue. In 1934 there was a period when foreign creosote was not readily available and some domestic creosote was purchased with a residue of 27.05%. The Northern Pacific experience with domestic creosote shows residue of 20% to 45%, recently the residue is quite generally lower than the higher rate.

My statement in second paragraph, Page 4, of my letter of September 25th about the Santa Fe practice was quoted from memory of my conversation with Mr. Harris. I am now attaching a copy of his letter of September 24th more specifically stating their practice. I am also attaching Statement D-1 containing some abstracts of orders placed by the Santa Fe for creosote during January 1936 for the purpose of comparing their unit prices with our own. The only prices which are directly comparable with our own are those orders placed in the Chicago district f.o.b. their own tank cars for rail shipment to their inland plants. This shows that the average Santa Fe price is \$.1306 compared to the Northern Pacific \$.12375 a difference of \$.00715 or an increase of 5.8%. The Santa Fe regard this increase in cost more than justified. I shall not here elaborate further on this question of differences in creosote quality because as previously explained it has no determinative bearing on the acceptance or rejection of the contract proposal.

(13) Since we abandoned the creosote coal tar mixture we have quite generally designated our practice as the 50-50 mixture. It started, as I now recall, at 50% crude oil and 50% creosote coal tar mixture. We later on eliminated the coal tar mixture and used 45% No. 1 creosote and 55% crude oil and still retained the designation as a 50-50 mixture treatment to distinguish it from the straight creosote treatment. These proportions are by volume. The weight designation would be crude oil 51.93, creosote 48.07%. The designation makes no particular difference because under the contract we can vary the proportions of creosote and crude oil at our discretion.

(14) Statement No. 2 is a summary of the total cost of Inland Empire ties treated at Paradise and shipped to Seattle plant territory. Items 2, 3, and 4 under A are taken from the detail statements of unit costs, Statement No. 5, where interest on investment and depreciation of plant are Items 1 and 2-B, and they are, therefore, included to the amount of \$.022 in Statement No. 2. This item of \$.022 is set out specifically as

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a possible deduction when considering a strictly out of pocket cost basis and attention was directed to that item for that purpose in the discussion. We are not required or even permitted in the accounting classifications of maintenance of ways and structures expenses to make any charge for interest and depreciation on plant investment and, therefore, our investment still stands on the books in capital account at the accumulated figure up to date. If we had charged out depreciation at something like 3%, the investment would be practically written off by this time. We do, however, charge an item of interest and depreciation on ties furnished in joint facility track maintenance and construction in recognition of the fact that these items are included in some degree in all ties treated by contract, and the Northern Pacific is entitled to that consideration when it furnishes ties treated at its own plant in joint facility operations.

That depreciation which covers obsolescence and the accrued repairs or replacements is a legitimate charge against the product of an industry and is recognized by law in that appropriate deductions are permitted to the industry in making income tax returns. Differences of opinion with respect to measuring this item, to which I have previously referred, likewise prevail between the industries and the Treasury Department in income tax transactions. In comparing the cost of treatment by contract with the cost of work performed in company-owned plants, the statement is generally made that the railroads do not charge themselves with the investment costs of interest and depreciation, and it is for that reason that we have been in the habit of showing these items in our calculations used for these comparative purposes. We have never deceived ourselves as to the significance of this inclusion when the comparisons were judged on an out of pocket basis. Our plants are now nearly 30 years old and to all intents and purposes are still adequate and functioning essentially as efficiently as when they were new. This is largely due to the fact that in that interval of time there have been no radical changes in treatment practices insofar as our needs were concerned to suggest the operation of obsolescence. When we come to consider this matter of investment costs we must give due consideration to the fact that our plants were constructed at a time of a low level of construction costs so that our total investment is still only about \$200,000, whereas the Colman Company had to make an investment of \$300,000 in 1926 in an addition to their existing plant to take on the contract. The Great Northern plant at Hill-yard cost something in excess of \$500,000, and that is roughly the expenditure that would be involved in the construction of a new plant on the Coast.

(15) As I have previously explained, the contractor by reason of the uncertain volume offered and the trend of increasing labor and material costs would not make the proposal apply to a ten-year term. He



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would much prefer a contract from year to year. He is willing, however, to make this proposal cover a period of five years. Mr. Horrocks has some knowledge at least of negotiations between the Northern Pacific and the treating companies for the lease of the Paradise plant or the construction of a new plant in the vicinity of Seattle for handling railroad and commercial business. The only railroad business of any consequence in sight tributary to Seattle is that of the Milwaukee and the Northern Pacific. His company would be most intimately concerned with this new competition in the field. He is, therefore, desirous of keeping the Northern Pacific business at a figure which will not detrimentally influence the interest of his company as he views the situation. It is apparent that if and when this potential competition fades out of the picture he or his successors will be in position to increase in some degree the price on tie treatment without jeopardizing the railroad's economics of treated tie use. In view of the trend of increasing labor and material costs and these other considerations which I have mentioned, it was my personal view that we would be justified in accepting a five-year contract period for this proposal. It is apparent, however, that if there is any likelihood of our abandoning the use of treated ties or we intend to deal with another contractor, either through leasing the Paradise plant or with a new plant to be constructed on the Coast, this proposal, if accepted at all, should be on a year to year basis and then assume such risks as may be involved in having to pay higher prices which may possibly be imposed after the potential competitive atmosphere clears up. I shall not now take the time to discuss the business aspects both to the railroads and the contractor concerned with the construction of a new plant on the Coast.

(16) The entire investigation was directed towards the evaluation of the reasonableness of the contract proposal on the natural assumption that after the use of treated ties for a period of at least 25 years the economics of that practice have been definitely established.

While it has been definitely known for a considerable time that our treated tie practice has not developed the utmost in economic possibilities of treated ties, it is certain that treated ties have shown unmistakable economic advantages over the use of untreated ties throughout the System as a whole. Our tie plate protection for treated ties was up to 1923 admittedly entirely inadequate so that an unusually large percentage of treated ties failed directly from mechanical wear or from decay occasioned by the mechanical destruction. There have been relatively few ties which failed from decay as the primary causation. The influence of better tie plate protection is apparent in every-day observation.

In making economic comparisons the most important factor is the average life of the untreated tie and the treated tie and for that factor we must be guided by the results of our test tracks because general statistics of tie renewals are altogether too indefinite and uncertain for this purpose.

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We have some test tracks which are very extensive and the observations from these confirm the reliability of the results from the smaller standard test track sections. This discussion with respect to the Seattle plant territory must be related directly to the experience with Douglas fir ties. We have quite reliable records which indicate that the average life of the untreated Douglas fir is about eight years. It is reasonable conclusion from the evidences of the past to say that the larger tie plate will not in an important way increase the life of the untreated Douglas fir tie in main track because the decay life is still the controlling factor.

We have some reliable results from test tracks on the life of treated Douglas fir ties. All of these, however, were placed under small tie plates and the life of all these ties was fixed by the factor of mechanical wear so that there is necessarily introduced some element of speculation as to just how much longer these ties would last under the larger tie plates. It is a fact that in recent years our treating practices have been improved to make an important contribution toward extending still further the service life of treated Douglas fir ties. The records of the test tracks to which I have referred show an average life slightly in excess of sixteen years with 32% renewals. This partial average life projected on the renewal experience curve indicates a final average life of twenty years. It is not in any way distorting the significance of the evidence to conclude that treated Douglas fir ties with the improved methods of treatment and the larger tie plates as well as the generally improved track standards will in the main line give an average life of twenty-five years.

Statement E shows the annual costs as between treated and untreated Douglas fir ties in grades 4 and 5, both for twenty-five and twenty year average life of treated ties, and eight year average life for the untreated tie in each instance. This has been projected into the results per track mile and for all the main track mileage on the Tacoma Division shows a saving on a long interval period at the rate of \$107,798 per year. Statement E has been expanded to show the probable yearly savings through using treated ties throughout on all tracks tributary to the Seattle plant, separately for assumed twenty-five and twenty years average life of treated ties. For the purpose of affording at least a rough comparison the unit costs developed for the Seattle plant have been projected for the tracks tributary to the Paradise and Brainerd plants. The economy of the treated tie practice has been so generally accepted in the industry that all we can hope to accomplish by any new set of detailed figures from time to time is to more closely fix the economic limits. That is the thought in mind in resorting for the immediate purpose to the use of the same unit costs for the three plants. Summary A shows the economic results by plant output and in total for the System. The yearly System saving over a long period of years is \$1,437,315 for an average life of twenty-five years and \$1,072,074 for an average life of twenty years.



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Summary B shows the probable immediate yearly reductions in tie costs for a short interval of years following the reversion to untreated tie renewal throughout. For treated tie life of twenty-five years this is \$534,250, for twenty year average life equals \$667.813.

In the foregoing I have not discussed the tangible advantages in track maintenance arising from the fact that the use of treated ties requires on the average only about one-third the disturbance in each panel of track concerned with yearly tie renewals as compared with disturbances related to untreated ties. There is also the item of conservation of timber resources. All of these incidental advantages must necessarily take a secondary position in times of stress requiring the resort to the expedients of getting by. I should add here that for quite obvious reasons I have used the straight line method for computing annual costs because the sinking fund method does not square with actual practice in railroad maintenance transactions.

Statement E-1 shows the annual cost comparison of untreated and treated No. 5 Douglas fir ties based on the treating cost on the proposed contract at Seattle. From these figures it is readily possible to determine the economies under any assumed average life of treated ties. Statement E-2 shows the annual cost of treated ties in place for various average years of life for different contract treating cost per M FEM. This is to show the influence of deductions in contract treating costs and indicates clearly that it is necessary to project these figures in terms of cost per mile year in order to get the significance of a progressive change from \$6.25 per M to \$5.00 per M. Statement No. 3 is an approximate statement of the economic value of larger tie plates used with treated ties.

The decision of any management to change the practice from untreated to treated ties requires the payment of yearly premiums for a certain period of years to establish the economic cycle of treated tie advantage. These annual premiums do not return dividends until after that cycle has been established. It is this fact which prevented the general adoption of treated tie practice on the part of some carriers who were in straitened financial circumstances. After this economic cycle has once been established it must follow from an examination of the elements making up this set-up that the accrued premium payments can be cashed for immediate advantage for a short period of years by reverting at any time to the use of untreated ties so that the original position of higher annual costs will be gradually approached and fully attained after all the treated ties have been replaced by untreated ties. That situation is illustrated in the latter part of Statement E.

The use of treated ties is unquestionably justified from the economic aspects of annual maintenance costs. The decision to revert to the use of untreated ties must be based on reasons outside the field of transportation economics. The issues of financial expediency are corporate questions to be decided after a weighing of the elements of investor and public interest. That large

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group of statistical analysts who scout the characteristic indices of railroad operations to diagnose the physical and financial well being of properties in the interest of their investor clientele are prone whenever they have observed marked changes in practices such as a reversion to untreated after a long period of treated tie use, to quite generally catalogue this as an evidence of existing or impending financial embarrassment.

The rejection of the instant proposal should not necessarily of itself spell the necessity to go back to the use of untreated ties. The use of Inland Empire ties treated at Paradise for the Tacoma Division will afford essentially the same economic results. Should that plan prove impracticable of accomplishment, then Coast Douglas fir ties could be treated at Paradise and shipped back to the Tacoma Division. This would reduce the yearly savings on all the ties tributary to the Seattle plant on the basis of an average No.4 tie from \$267,124 to \$254,232, or a difference of \$12,892. I stressed the fact that the results obtainable from Paradise plant operations in a more pronounced degree than ten years ago provides the plane of reference for contract cost comparisons. The proposal from every phase of comparison is more favorable than the contract commitment of ten years ago.

L. YAGER.

LY:m  
encl.



## NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ESTIMATES OF COSTS TO THE CONTRACTOR FOR TREATING CROSS TIES UNDER PROPOSED NEW CONTRACT AT SEATTLE FOR THE NUMBER OF TIES REQUIRED FOR 10 YEAR PERIOD AS OUTLINED IN STATEMENT No. 10, SEPTEMBER 10, 1936. (PARAGRAPH 5).

Contract price \$6.25 per M for complete treatment is equivalent to \$.2331 per tie (7x8-8'). Assume average of 200,000 ties per year.

(A) DIRECTLY ASSIGNABLE ITEMS

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - Steam, power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and Supplies, track and bldg. maintenance	.02385
Sub total	\$.09635

(B) DIRECTLY ASSIGNABLE TAXES

1. State Ind. Tax and Workmans Compensation \$.0215 per hr	\$.0017
2. Federal Social Security Act 2.1% of Labor	.0011
3. Business and Occupational Tax 1/4% Gross Business	.0008
Sub total	\$.0036

(C) GENERAL OVERHEAD ETC.

1. General and Plant Supervision	\$.0180
2. Taxes on plant	.0180
3. Insurance on plant	.0020
Sub total	\$.0380

(D) OVERHEAD-INVESTMENT COSTS (Interest 6%, Depreciation 5%)

1. Amortization of plant \$300,000 in 20 years	\$.07500
2. Interest on Investment \$300,000 @ 6%	.04324
Sub total	\$.11824

(E) OVERHEAD-INVESTMENT COSTS (Interest 5%, Depreciation 3%)

1. Amortization of plant	\$300,000 in 33 years	\$.045000
2. Interest on Investment	\$300,000 @ 5%	.042375
	Sub total	\$.087375

SUMMARY (Interest 6%, Depreciation 5%)

(A) Directly Assignable Items	\$.09635
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.03800
(D) Overhead-Investment Costs	.11824
	Total Costs \$.25619
	Payments received .23310
	Loss \$.02309
	Loss per cent of cost 9.02%

SUMMARY (Interest 5%, Depreciation 3%)

(A) Directly Assignable Items	\$.09635
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.03800
(E) Overhead-Investment Costs	.08738
	Total Costs \$.22533
	Payments received .2331
	Profit \$.00777
	Profit percent of cost .34%

Note: In each case the first ten years' interest and amortization charges are allocated to the first ten year period ending December 31, 1936.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936.



## NORTHERN PACIFIC RAILWAY COMPANY

ESTIMATED SEGREGATION OF COSTS TO CONTRACTOR ON TREATING MATERIAL AT SEATTLE PLANT, FOR CROSS TIES ONLY. BASED ON AVERAGE OF 300,000 PCS. 7 x 8 - 8' TIE EQUIVALENTS. THIS IS A RESTATEMENT OF STATEMENT No. 6, SEPTEMBER 17, 1936 FOR DIFFERENT BASES OF AMORTIZATION AND INTEREST CHARGES (Paragraph 6).

Contract price \$6.50 per M for 12 hr. treatment is equivalent to \$.243 per tie (7x8-8').

Actual price paid contractor for treatment of all cross ties to August 1, 1936 was \$.2600 per tie covering all additional charges for overtime.

(A) DIRECTLY ASSIGNABLE ITEMS

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - Steam, power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and supplies, track and bldg. maintenance	<u>.01590</u>
Sub total	<u>\$.08840</u>

(B) DIRECTLY ASSIGNABLE TAXES

1. State Ind. Tax and Workmen's Compensation \$.0215 per hr	.0017
2. Federal Social Security Act 2.1% of Labor	.0011
3. Business and Occupational Tax 1/4% on Gross Business	<u>.0008</u>
Sub total	<u>\$.0036</u>

(C) GENERAL OVERHEAD ETC.

1. General and Plant Supervision	\$.0120
2. Taxes on plant	.0120
3. Insurance on Plant	<u>.0010</u>
Sub total	<u>\$.0250</u>

(D) OVERHEAD-INVESTMENT COSTS (Interest 6%, Depreciation 10%)

1. Amortization of plant \$ 300,000 in 10 years	\$.1000
2. Interest on Investment \$ 300,000 @ 6%	<u>.0330</u>
Sub total	<u>\$.1330</u>

(E) OVERHEAD-INVESTMENT COSTS (Interest 6%, Depreciation 5%)

1. Amortization of plant	\$300,000 in 20 years	\$.05000
2. Interest on Investment	\$300,000 @ 6%	.04815
	Sub total	\$.09815

(F) OVERHEAD-INVESTMENT COSTS (Interest 5%, Depreciation 3%)

1. Amortization of plant	\$300,000 in 33 years	\$.03000
2. Interest on Investment	\$300,000 @ 5%	.04325
	Sub total	\$.07325

SUMMARY (Interest 6%, Depreciation 10%)

(A) Directly Assignable Items		\$ .08840
(B) Directly Assignable Taxes		.00360
(C) General Overhead etc.		.02500
(D) Overhead - Investment Costs		<u>.13300</u>
	Total Costs	\$ .25000
	Payments received	<u>.26000</u>
	Profit	\$ .01000
	Profit Per cent of Total Cost	4%

SUMMARY (Interest 6%, Depreciation 5%)

(A) Directly Assignable Items	\$.08840
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.02500
(E) Overhead - Investment Costs	<u>.09815</u>
Total Costs	\$.21515
Payments received	<u>.26000</u>
Profit	\$.04485
Profit Per cent of Total Cost	20.8%



SUMMARY (Interest 5%, Depreciation 3%)

(A) Directly Assignable Items	\$ .08840
(B) Directly Assignable Taxes	.00360
(C) General Overhead etc.	.02500
(F) Overhead - Investment Costs	.07325
Total Costs	\$ .19025
Payments received	.26000
Profit	\$ .06975
Profit Per cent of Total Cost	36.6%

Note - In each case the first ten years' interest and amortization charges are allocated to the period in question, namely ten year period ending December 31, 1936.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936.

Statement B

NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ESTIMATES OF TOTAL PROFIT TO THE CONTRACTOR FOR TREATING N. P. MATERIAL UNDER EXISTING AND PROPOSED CONTRACTS. (Paragraph 7).

(A) PROFITS UNDER PRESENT CONTRACT EXPIRING DECEMBER 31, 1936.

1. Based on Interest 6%, Depreciation 10% of \$300,000 Investment

(a) Profit on Cross ties	2,858,514 pcs. @ 1¢	\$28,585
(b) Profit on Switch ties	8,661 M FBM @ \$1.29	11,172
(c) Profit on Lumber and Piling	6,740 M FBM @ \$4.47	30,128
Total		\$69,885
Profit per year		\$ 6,988

2. Based on Interest 6%, Depreciation 5% of \$300,000 Investment

(a) Profit on Cross ties	2,858,514 pcs @ \$.04485	\$128,204
(b) Profit on Switch ties	8,661 M FBM @ \$2.32	20,093
(c) Profit on Lumber and Piling	6,740 M FBM @ \$5.40	36,396
Total		\$184,693
Profit per year		\$ 18,469

3. Based on Interest 5%, Depreciation 3% of \$300,000 Investment

(a) Profit on Cross ties	2,858,514 pcs. @ \$.06975	\$199,381
(b) Profit on Switch ties	8,661 M @ \$2.98	25,809
(c) Profit on Lumber and Piling	6,740 M @ \$6.06	40,844
Total		\$266,034
Profit per year		\$ 26,603

(B) PROFIT UNDER PROPOSED CONTRACT - AMOUNT OF MATERIAL STATEMENT No.10

1. Based on Interest 6%, Depreciation 5% of \$300,000 Investment

(a) Loss on Cross ties	1,997,000 @ \$.02309	\$46,116
(b) Profit on Switch ties	5,000 M @ \$2.79	13,950
(c) Profit on Lumber and Piling	6,000 M @ \$5.49	32,940
Total		\$ 774
Profit per year		\$ 77.40

2. Based on Interest @ 5%, Depreciation 3% of \$300,000 Investment

(a) Profit on Cross Ties	1,997,000 @ \$.00777	\$15,515
(b) Profit on Switch ties	5,000 M @ \$2.79	13,950
(c) Profit on Lumber and Piling	6,000 M @ \$6.32	37,920
Total		\$67,385
Profit per year		\$ 6,738



Note: Under heading (B) Profits under proposed contract the Overhead - Investment Costs have all been absorbed by the item cross ties (Statement A) because the data on probable use of switch ties, timber and piling for the ten-year period is more indefinite than on cross ties; the net result, however, would be the same as though these charges had been spread uniformly over all the product. The divisions of profit as accruing to switch ties, lumber and piling are, in the absence of data on unit handling costs, interpolated from cross tie costs and are therefore not accurate or reliable.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 27, 1936.

Statement C

## NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE RESULTS TO GREAT NORTHERN AND NATIONAL POLE AND TREATING COMPANY  
OPERATING UNDER FIVE YEAR CONTRACT DATED JUNE 1, 1936, EFFECTIVE MAY 1, 1937.

This is a restatement of Statement No. 13, dated Sept. 17, 1936 (Paragraph 9).

(A) RESULTS TO GREAT NORTHERN BASED ON AVERAGE TIE 7x8-8'

<u>Costs to Great Northern</u>	<u>Per Tie</u>
1. Taxes on plant	\$.0120
2. Insurance on plant	.0010
3. State Industrial Tax and Workmen's Compensation	.0017
4. Federal Security Tax and Business and Occupational Tax	.0019
5. Total Taxes	\$.0166
6. Contract payment @ \$8.96 per M FBM	.3319
7. Total Cost Taxes and Contract unit prices	\$.3485
8. G. N. Plant Investment \$500,000 @ 5%, average \$12,625	.0243
9. G. N. Plant Amortization \$500,000 @ 3% = \$15,000	.0264
10. G. N. Grand Total Cost	\$.3992
11. Credit Rental received \$35,000	.0622
12. Net Cost to Great Northern	\$.3370
13. N. P. Cost, Seattle (new contract)	.2331
Increased Cost to Great Northern	\$.1039
Increase	44.56%

(B) RESULTS TO CONTRACTOR

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel, steam and power	.02000
7. Plant labor, operation and repairs	.02100
8. Material and supplies	.01500
9. Maintenance of yard tracks 6 miles, \$3500	.00311
10. Total Direct Costs	\$.09061
11. Interest and Depreciation on cranes and locomotives \$60,000 @ 10% = \$6,000	.01639
12. General and Plant Supervision \$22,000	.03888
13. Sub total	\$.14588
14. Rental payment to Great Northern \$35,000	.06220
15. Grand Total Cost to Contractor	\$.20808
16. Received from G. N. @ \$8.96 per M FBM	.33190
Profit	\$.12382
Profit percentage of Total Cost	59.48%

Asst. Chief Engineer  
St. Paul, Minnesota  
October 26, 1936.



Statement D

NORTHERN PACIFIC RAILWAY COMPANY

COMPARISON OF AVERAGE YEARLY COSTS FOR DOMESTIC AND FOREIGN CREOSOTE; COMPUTED ON BASIS OF CREOSOTE COSTS DELIVERED IN STORAGE TANKS AT SEATTLE PLANT MIXTURE TREATMENT 45% CREOSOTE, 55% PETROLEUM. AVERAGE TIE REQUIRES 1.35 GAL. CREOSOTE, 1.65 GAL. PETROLEUM. (Statement No. 7). (Paragraph #12).

1. Treating 300,000 pcs. Cross ties @ 1.35 gals. Domestic @ \$.15123	\$61,248
2. Treating 300,000 pcs. Cross ties @ 1.35 gals. Foreign @ \$.1326	53,703
3. Increased Cost Domestic Creosote	\$ 7,545
4. Increased Cost Domestic Creosote based on treating 200,000 pcs. Cross ties	\$ 5,030
5. Increased Cost Domestic Creosote based on treating 100,000 pcs. Cross ties	\$ 2,515
6. Increased Cost Domestic Creosote per M FBM	\$ .674
7. Increased Cost Domestic Creosote per Average Tie	\$ .02515
8. Approximate Total Increased Cost of using Domestic Creosote on estimated total forest products for ten-year period (Statement No. 10, September 10, 1936)	\$57,664

Asst. Chief Engineer  
St. Paul, Minnesota  
October 22, 1936.

NORTHERN PACIFIC RAILWAY COMPANY

ABSTRACT OF SOME ORDERS PLACED BY THE A. T. & S. F. RY. CO. DURING JANUARY 1936 FOR DELIVERY OF CREOSOTE TO THEIR SPECIFICATIONS DATED SEPT. 29, 1931. THIS SPECIFIES A MAXIMUM RESIDUE OF 20% ABOVE 355° CENTIGRADE.

1. Order placed 1-18-36 with Bernath Lemcke, foreign creosote oil  
1,000,000 gallons delivered into storage tanks at  
National City, near San Diego, California @ \$.1390 per gallon
2. Order placed 1-18-36 with Barrett Company, Chicago, for  
1,000,000 gallons delivered into storage tanks at  
Galveston, Texas, domestic creosote @ \$.12886 per gallon
3. Order placed with Rilly Tar & Chemical Company, Chicago,  
500,000 gallons domestic creosote delivered into Santa Fe  
tank cars, f.o.b. Corinth, Illinois @ \$.13021 per gallon
4. Order placed 1-18-36 with Inland Tar Company, Chicago,  
500,000 gallons domestic creosote into Santa Fe tank  
cars at Corinth, Illinois @ \$.13059 per gallon
5. Order placed 1-18-36 with Colorado Fuel & Iron Company, Chicago,  
160,000 gallons domestic creosote into Santa Fe tank cars  
at Minequa, Colorado @ \$.1325 per gallon.

Note: No prices taken for 1937 requirements.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936



THE ATCHISON, TOPEKA AND SANTA FE RAILWAY SYSTEM

Chicago, Sept. 24, 1936.

Mr. L. Yager  
Asst. Chief Engineer  
Northern Pacific Railway Co.  
St. Paul, Minnesota

Dear Mr. Yager:

Yours of September 22nd:

Prior to 1931, except during the World War, we used foreign creosote at Somerville and National City. This was delivered by boat to Galveston for the Somerville plant and by boat to San Diego for National City. From 1931 to date, we quit buying foreign oil for use at Somerville and have purchased this requirement from domestic producers on the Atlantic Coast, delivered by boat to Galveston. With the exception of a cargo of domestic creosote delivered by boat to National City in 1933, all of the creosote used at that plant has been imported. On account of subnormal requirements, we did not require any creosote deliveries at National City from 1933 until the spring of 1936 and the requirements furnished this year were foreign oil.

Yours very truly,

(Signed) G. W. Harris

C O P Y

Statement E

NORTHERN PACIFIC RAILWAY COMPANY

APPROXIMATE ANNUAL COST COMPARISONS OF TREATED AND UNTREATED CROSS TIES. BASED ON COAST DOUGLAS FIR TREATED AT SEATTLE UNDER PROPOSED CONTRACT. AVERAGE TIE LIFE TAKEN FROM ACTUAL AND PROJECTED TEST TRACK DATA (Paragraph 16).

(A) UNIT COSTS OF TIES

	<u>Untreated Ties</u>		<u>Treated Ties</u>	
	<u>No. 4</u>	<u>No. 5</u>	<u>No. 4</u>	<u>No. 5</u>
1. Purchase Price @ \$12.00 M	\$.4480	\$.5355		
2. Sales Tax 2% on 75%	.0067	.0080		
3. Haul on ties @ \$.003	.0278	.0333		
4. Cost of tie, treatment and hauls			\$.9908	\$1.1812
5. Total Cost of ties	\$.4825	\$.5768	\$.9908	\$1.1812
6. Cost of placing tie in track	.4000	.4000	.4000	.4000
7. Total Cost of ties in place	\$.8825	\$.9768	\$1.3908	\$1.5812
8. Average Cost per year 8 year untreated,				
25 years treated	\$.1103	\$.1221	\$.0556	\$.0632
9. Increased cost	\$.0547	\$.0589		
10. Increased cost %	98.4%	93.1%		
11. Average cost per year untreated				
20 years treated	\$.1103	\$.1221	\$.0695	\$.0740
12. Increased cost	\$.0408	\$.0481		
13. Increased cost Percent	58.7%	65.0%		

(B) APPROXIMATE COST COMPARISONS - TRACK MILES AND DISTRICTS

- Standard Main Track 24 No. 5 ties per panel = 3250 per mile
- No. 4 Tie 7x8-8' assumed to be the average tie size for average of all tracks.
- Annual cost untreated Douglas fir No. 4 tie in place assumed @ \$.8825 for 8 year average life = \$.1103
- Annual cost of untreated Douglas fir No. 5 tie in place assumed @ \$.9768 for 8 year average life = \$.1221
- Annual cost of treated Douglas fir No. 4 tie in place assumed @ \$1.3908 for 25 year average life = \$.0556
- Annual cost of treated Douglas fir No. 4 tie in place assumed @ \$1.3908 for 20 year average life = \$.0695
- Annual cost of treated Douglas fir No. 5 tie in place assumed @ \$1.5812 for 25 year average life = \$.0632
- Annual cost of treated Douglas fir No. 5 tie in place assumed @ \$1.5812 for 20 year average life = \$.0740

(a) Comparisons for 1 mile Standard Main Line Track

- Decreased cost for No. 5 treated ties average life 25 years =  
 $($.1221 - $.0632 = $.0589) \times 3250$  \$191.47
- Decreased cost for No. 5 treated ties average life 20 years =  
 $($.1221 - $.0740 = $.0481) \times 3249$  \$156.33
- Decreased cost Main Line track Tacoma Div. 25 year life =  
563 miles x \$191.47 \$107,798
- Decreased cost Main Line track Tacoma Div. 20 year life =  
563 miles x \$156.33 \$ 88,014



(b) Comparisons for all tracks Tacoma Div. (Seattle Plant) No. 4 Average Tie

1. Decreased cost No. 4 treated tie average life 25 years =  
 $(\$ .1103 - \$ .0556 = \$ .0547) \times 4,883,448 \text{ ties} =$  \$267,125
2. Decreased cost No. 4 treated tie average life 20 years =  
 $(\$ .1103 - \$ .0695 = \$ .0408) \times 4,883,448 \text{ ties} =$  \$199,245

(c) Comparisons for all tracks territory tributary to Paradise Plant  
3655 track miles 9,961,324 ties No. 4 average tie same cost as (b)

1. Decreased cost No. 4 treated tie average life 25 years =  
 $(\$ .1103 - \$ .0556 = \$ .0547) \times 9,961,324 =$  \$544,884
2. Decreased cost No. 4 treated tie average life 20 years =  
 $(\$ .1103 - \$ .0695 = \$ .0408) \times 9,961,324 =$  \$406,422

(d) Comparisons for all tracks territory tributary to Brainerd Plant  
4230 track miles 11,431,548 No. 4 average tie same cost as (b)

1. Decreased cost No. 4 treated tie average life 25 years =  
 $(\$ .1103 - \$ .0556 = \$ .0547) \times 11,431,548 =$  \$625,306
2. Decreased cost No. 4 treated tie average life 20 years =  
 $(\$ .1103 - \$ .0695 = \$ .0408) \times 11,431,548 =$  \$466,407

(e) Comparisons resulting from using untreated ties throughout in the future.  
Based on average No. 4 tie. Average renewal rates 8 year life 12½%, 20 year life 5%, 25 year life 4%.

1. Decreased costs per year for all tracks tributary to  
 Seattle Plant for average life 25 years =  
 $4\% \text{ of } 4,883,448 = 195338 \times (\$1.3908 - \$ .8825 = \$ .5083) =$  \$ 99,290
2. Decreased costs per year for all tracks tributary to  
 Seattle Plant for average life 20 years =  
 $5\% \text{ of } 4,883,448 = 244172 \times (\$1.3908 - \$ .8825 = \$ .5083) =$  \$124,113
3. Decreased costs per year for all tracks tributary to  
 Paradise Plant for average life 25 years =  
 $4\% \text{ of } 9,961,324 = 398453 \times (\$1.3908 - \$ .8825 = \$ .5083) =$  \$202,534
4. Decreased costs per year for all tracks tributary to  
 Paradise Plant for average life 20 years =  
 $5\% \text{ of } 9,961,324 = 498066 \times (\$1.3908 - \$ .8825 = \$ .5083) =$  \$253,167
5. Decreased costs per year for all tracks tributary to  
 Brainerd Plant for average life 25 years =  
 $4\% \text{ of } 11,431,548 = 457262 \times (\$1.3908 - \$ .8825 = \$ .5083) =$  \$232,426
6. Decreased costs per year for all tracks tributary to  
 Brainerd Plant for average life 20 years =  
 $5\% \text{ of } 11,431,548 = 571577 \times (\$1.3908 - \$ .8825 = \$ .5083) =$  \$290,533

SUMMARY (A) RESULTS BASED ON CONTINUED USE OF TREATED TIES

	Miles Track	Renewals per Year			Decreased Costs Average Life Treated Ties	
		Untreated	Treated	Treated	25 years	20 years
			25 yrs.	20 yrs.		
1. Seattle Plant	1828	610,431	195,338	244,172	\$267,125	\$199,245
2. Paradise Plant	3655	1,245,166	398,453	498,066	544,884	406,422
3. Brainerd Plant	4230	1,428,943	457,262	571,577	625,306	466,407
4. Totals	9713	3,284,540	1,051,053	1,313,815	\$1,437,315	\$1,072,074

Note: Cost of total system ties only average No. 4 7x8-8' untreated @ \$.4425 x 3,284,540 = \$1,453,409; for 25 year life No. 4 treated ties @ \$.9908 x 1,051,053 = \$1,041,383; for 20 year treated life = \$.9908 x 1,313,815 = \$1,301,728.

SUMMARY (B) RESULTS BASED ON REVERSION TO USE OF UNTREATED TIES

	Miles Track	Yearly Tie Renewals		Decreased Costs Average Life Treated Ties	
		25 Year Life	20 Year Life	25 years	20 years
1. Seattle Plant	1,828	195,338	244,172	\$ 99,290	\$124,113
2. Paradise Plant	3,655	398,453	498,066	202,534	253,167
3. Brainerd Plant	4,230	457,262	571,577	232,426	290,533
4. Total	9,713	1,051,053	1,313,815	\$ 534,250	\$667,813

Note: The figures for annual renewals and decreased costs under Summary (B) reversion to use of untreated ties would hold approximately for the first 8 year period after which this cycle would require progressive renewals at a rate of 12½% because we are dealing with average life periods. After the first 8 year period there would still be 17 years of treated ties to be renewed showing the same results by 8 year periods but the untreated tie renewal costs of the first 8 year period repeated would eventually wipe out the apparent costs. In order to avoid the vast amount of work required to take into consideration the effect of differences in cost of ties and treatment as well as the differences in average life of ties we have projected the results for the system from the differences disclosed by the Seattle Plant. These foregoing rough assumptions explain to some extent the differences between the predicted tie renewals and the actual renewals made in recent years.



Statement E-1

NORTHERN PACIFIC RAILWAY COMPANY

COMPARATIVE ANNUAL COST OF UNTREATED AND TREATED No. 5 COAST DOUGLAS FIR TIES. BASED ON TREATING COSTS UNDER PROPOSED CONTRACT AT SEATTLE.

	<u>Untreated</u>	<u>Treated</u>
Total Cost in Place	<u>\$.9768</u>	<u>\$1.5812</u>

Average Years Life

Cost per Year

1	.9768	1.5812
2	.4884	.7906
3	.3256	.5271
4	.2442	.3953
5	.1954	.3162
6	.1628	.2635
7	.1395	.2259
8	.1221(a)	.1977
9	.1085(b)	.1757
10	.0977(c)	.1581
11	.0888	.1437
12	.0814	.1318
13	.0751	.1216(a)'
14	.0666	.1129
15	.0651	.1054(b)'
16	.0610	.0988(c)'
17	.0515	.0930
18		.0878
19		.0832
20		.0791
21		.0753
22		.0719
23		.0687
24		.0659
25		.0632
26		.0608
27		.0586
28		.0565
29		.0545
30		.0527

Note: (a) average yearly cost of untreated tie 8-year average life gives same average annual cost of treated tie lasting 13 years (a'). (b) 9 years same as (b') 15 years. (c) 10 years same as (c') 16 years.

Asst. Chief Engineer  
St. Paul, Minnesota  
October 23, 1936.

## NORTHERN PACIFIC RAILWAY COMPANY

## COMPARATIVE ANNUAL COSTS OF UNTREATED No. 5 COAST DOUGLAS FIR TIES AND TREATED TIES OF VARIABLE TREATMENT COSTS.

	Untreated Cost	Treatment @ \$6.25 M	Treatment @ \$6.00 M	Treatment @ \$5.50 M	Treatment @ \$5.00 M
Total Cost in Place	\$ .9768	\$1.5812	\$1.5700	\$1.5477	\$1.5254

Average Years Life	Costs per Year				
5	.1954	.3162	.3140	.3095	.3051
6	.1628	.2635	.2616	.2579	.2542
7	.1395	.2259	.2243	.2211	.2179
8	.1221(a)	.1977	.1962	.1935	.1907
9	.1085	.1757(b)	.1744(b)	.1720(b)	.1695(b)
10	.0977	.1581	.1570	.1548	.1525
11	.0888	.1437	.1427	.1407	.1387
12	.0814	.1318	.1308	.1290	.1271
13	.0751	.1216(a)	.1208(a)	.1191(a)	.1173(a)
14	.0666	.1129	.1121	.1105	.1090
15	.0651	.1054	.1047	.1032	.1017
16	.0610	.0988	.0981	.0967	.0953
17	.0516	.0930	.0924	.0910	.0897
18		.0878	.0872	.0860	.0847
19		.0832	.0826	.0815	.0803
20		.0791	.0785	.0774	.0763
21		.0753	.0748	.0737	.0726
22		.0719	.0714	.0703	.0693
23		.0687	.0683	.0673	.0663
24		.0659	.0654	.0645	.0636
25		.0632	.0628	.0619	.0610
26		.0608	.0604	.0595	.0587
27		.0586	.0581	.0574	.0565
28		.0565	.0561	.0553	.0545
29		.0545	.0541	.0534	.0526
30		.0527	.0523	.0516	.0508

1. Cost per main track mile per year untreated No. 5 tie average life  
8 years  $3250 \times \$ .1221$  \$396.83
2. Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost @ \$6.25 per M  
 $3250 \times \$ .0632$  \$205.40
3. Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost @ \$6.00 per M  
 $3250 \times \$ .0628$  \$204.10
4. Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost \$5.50 per M  
 $3250 \times \$ .0619$  \$201.18
5. Cost per main track mile per year treated No. 5 tie average life  
25 years with treating cost \$5.00 per M  
 $3250 \times \$ .061$  \$198.25



## NORTHERN PACIFIC RAILWAY COMPANY

ESTIMATED VALUE OF TREATED TIE PROTECTION THROUGH ADEQUATE TIE PLATES TO INCREASE AVERAGE LIFE FROM 20 YEARS to 25 YEARS. TREATING COST TAKEN AT \$6.25 per M. COST OF No. 5 TREATED DOUGLAS FIR TIE IN PLACE \$1.5812.

1. Annual Cost mile main track No. 5 tie average life 20 years	
3250 x \$.0791	\$257.08
2. Annual Cost mile main track No. 5 tie average life 25 years	
3250 x \$.0632	<u>\$205.40</u>
3. Difference	\$ 51.68
4. Value difference @ 5% = 51.68 x 20 =	\$1033.60
5. Cost tie plates 7 x 9 - 1 mile = 3250 x 2 = 6500	
6500 x 8.68# = 56420# = 28.21 tons @ \$45.00	\$1269.45
6. Cost tie plates 7-1/2 x 10-7/8 - 1 mile = 3250 x 2 =	
6500 6500 x 12.8# = 83200# = 41.6 tons @ \$45.00	\$1872.00
7. Difference Increase	\$602.55
8. Saving \$51.68 per year on \$602.55 increased cost =	8.5%

Asst. Chief Engineer  
St. Paul, Minnesota  
October 27, 1936

St. Paul, Minnesota

October 30, 1936.

Mr. G. R. Hopkins:

Your wire of the 26th followed by letter the 27th gave me the information I desired in connection with commercial shipments from the West Coast Wood Preserving Company's Seattle plant.

L. YAGER.

LY:m



MEMORANDUM:

MR. BERNARD BLUM:

Mr. Capron called up this afternoon to inquire when the contract with the West Coast Wood Preserving Company expires. I told him the contract expires December 31. Mr. Capron then stated he was dealing with a party who, as I understand it, has in mind building a treating plant on the Coast, and intend to solicit our business.

L. Yager

St. Paul, October 8, 1936w

MEMORANDUM:

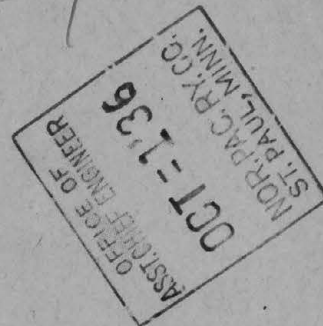
MR. A. J. LOOM:

Attaching corrected sheets 4 and 5 of  
Memorandum accompanying my letter of September 25 on  
new contract with West Coast Wood Preserving Company.  
Please substitute for those sent you with my letter that  
date.

L. Yager

St. Paul, Sept. 30, 1936w





Saint Paul, Minn.,  
September 30, 1936

Mr. L. Yager:

Your letter of the twenty-fifth about opening the Seattle treating plant.

It will be satisfactory to start treating in November.

Bernard Blum

cc Mr. A. J. Loom

Saint Paul, Minn.,

September 26, 1936w

MR. A. J. LOOM:

I am handing you herewith copy of my letter yesterday to Mr. Blum concerning the treating situation at Seattle. I would appreciate any comments or suggestions you have to offer with respect to this presentation. You already have copy of the latest revision of tentative draft of the contract.

L. YAGER.



Saint Paul, Minn.,

September 25, 1936w

MR. A. J. LOOM:

I am returning herewith your file on the supplementary contract at Seattle treating plant, terminating with your letter February 13, 1933, to Mr. Harding. I acquired this while we were at Seattle.

L. YAGER.

Saint Paul, Minn.,  
September 25, 1936w

MR. BERNARD BLUM:

I devoted considerable time with Messrs. Loom and Hopkins accumulating and compiling data for a complete review of the situation relating to contract treatment of ties for the Coast territory at Seattle. For convenient reference in connection with the discussion that follows these data are shown in Statements #1 to #14 inclusive, next attached.

We spent several days early this month discussing this subject with Mr. H. E. Horrocks, Manager, and Mr. A. D. Barrall, secretary-treasurer, of the West Coast Wood Preserving Company, which took over the original contract of November 4, 1926 with the J. M. Colman Company. The present contract which expires Dec. 31, of this year, and subsequently modified in 1932 was made after a thorough-going investigation of all the economic possibilities of contract treatment on the Coast, starting originally with an investigation of the economics of constructing our own plant at either Tacoma or Seattle. That investigation also covered the prospects of combining the treatment of railroad forest products in either a jointly-owned railroad plant or some existing or projected commercial plant. The evidence of that former investigation has been reviewed in the present instance.

The contract has been, in all respects, advantageous to the creosoting company. In Statement #6 we have attempted from our own experience and the observations at the contractor's plant to set up the costs to the contractor. The contractor made an investment of about \$300,000 in expansion in the way of seasoning yard and increased treating facilities to take on the railroad contract. We have, in this set-up, arbitrarily charged six percent on the depreciated principal, and amortized completely the plant in the ten year period of the contract. This shows that on this basis the contractor made a profit of four percent on his total operations under this contract and provided himself with a plant free of future ownership obligations to carry on future operations on a more favorable basis. It is true, of course, that as a practical business matter the contractor cannot for purposes of taxation depreciate his plant in this fashion, so that whatever adjustments are made in the depreciation and interest rates reflect a corresponding increase in operating profit. It is clear to us that by whatever line of reasoning this matter may be presented, the contractor's profit on these operations is considerably less than prevails in any of the commercial plants in that territory.

The prices which we could expect to obtain for a renewal of this contract are dictated by the competitive situation. Ten years ago the competition for comparative purposes was our own plant at Paradise, and that situation prevails today even in a more pronounced degree because of the fact that the volume of business which we have to offer in the future is considerably less and there is now no prospect of working out any combination of railroad business for a jointly owned plant. I have discussed the entire competitive situation in some considerable detail in the next attached memorandum. The contractor is anxious to maintain these contract relations in the future for such volume as we may have to offer and he is not



Mr. Blum...2

Sept. 25, 1936.

requiring any guarantees of minimum volume as was necessary for obvious reasons in the present contract. The contractor's labor costs at present are higher than they were in 1929 by reason of certain labor schedule regulations, and there has since been introduced a number of State and Federal taxes which increased his costs. The contractor owns two plants; the one at Eagle Harbor having six cylinders, was designed originally for treatment of piling and timber. About ten years ago they took on treatment of ties and timber for the Milwaukee Road. The Milwaukee Road barges the ties between Seattle and Eagle Harbor. These ties are all delivered green and are seasoned in the cylinders. The Seattle plant is devoted to the Northern Pacific contract, and the treatment of material in transit for movement by rail to the east, as well as a considerable volume of business delivered locally by truck. The contractor has treated considerable more ties and lumber for the Milwaukee than has been handled under the Northern Pacific contract. This business will continue in the future. The contractor, therefore, is not in a position to make any material reductions in the rates to the N. P. without likewise reducing prices to the Milwaukee.

The contractor has developed an excellent yard and handling facilities for storing and seasoning of ties. If the N. P. contract is not continued this facility would be well adapted to handling forest products for treatment and shipment to the Orient, or coastwise movement. A large increase in this character of business has been anticipated but may not materialize for a long time to come.

The present contract has been advantageous to the N. P. because of the ideal seasoning conditions that exist in this location and the economic cost comparisons as to treating at our own plant at Paradise. The contract has been advantageous from the standpoint of our being able to have ties treated from seasoning stock at any time on short notice, a situation which we cannot meet to the same degree in our own plant.

I am attaching hereto tentative draft of contract prepared to definitely outline the contractor's proposal and represents no commitment by either party until properly executed. The contract requires no obligation with respect to minimum amounts of material to be treated. We can offer any amount we choose except that we would be obligated to offer the contractor any material used in the territory tributary to this plant not reserved for treatment in any of our own plants.

The schedule of prices makes a reduction of 25¢ per MFEM in the treatment of cross ties and lumber other than cross ties and switch ties. The \$6.25 price likewise applies to the treatment of gross cross ties and switch ties handled direct from the cars through the plant and back on to the cars for loading out. The extra cost for cylinder time for treating cross ties and switch ties beyond the first 12-hour period has been eliminated. If we should elect to treat partially seasoned cross ties and switch ties taken from seasoning stock the cost will be \$6.25 per MFEM plus compensation to the contractor for having unloaded and stacked these ties for seasoning. This amounts to 45¢ per MFEM for cross ties and 60¢ per MFEM for switch ties.

Sept. 25, 1936.

By far the largest portion of the contract deals with cross ties and switch ties. Statement #8 shows that from the standpoint of volume these two items constitute 93.8 percent of the total. Statement #11 shows that from the standpoint of cost, cross ties and switch ties account for 88 percent of the total for the period from the beginning of the contract up to August 1, 1936.

On Statement #10 I have attempted to estimate roughly the probable treatment requirements in the territory tributary to this plant for the next ten year period. This has been worked up from the best data available as to the number of untreated ties still in track in that territory after the current year, and the estimated renewal of treated ties in track, and approximate estimate of switch tie, piling and timber likely to be treated. This shows an average of approximately 200,000 ties per year. The decrease in prices under the new schedules applied to the quantities of Statement #10 show a reduction of about \$30,000. The reduction based on cross ties and switch ties only is 5.5%. The reduction based on the total material covered by Statement #10 is 4.6%.

The price schedule on treatment of piling has not been changed. The schedule is reasonable for the treatment of seasoned piling. Our piling requirements have been so uncertain that we have not been able to carry a stock of seasoning piling in anticipation of the requirements, so that we have gradually worked around to purchasing treated piling from the contractor. I can see no justification from the present indications for our attempting to carry a seasoning stock of piling in view of the arrangements which are outlined in the proposal. The treating of piling is a large proportion of the contractor's business and they generally have invested about \$200,000 in seasoning piling stock to meet current orders. The prices which they charge commercially are based on a compromise between the cost of treating green and seasoned piling. The proposal is based on our purchasing from the contractor treated piling at the current commercial prices which are fixed by the competition in that locality. These prices are subject to check from time to time from the contractor's records and we are therefore in a position to obtain the prices dictated by the local competition from time to time and that is the most advantageous position we could hope to obtain under any circumstances and we still have the privilege of availing ourselves at any time to such economic advantages as may accrue from maintaining our own supply of green or seasoned piling.

The contractor uses foreign creosote delivered by boat to his large storage tanks and it has been our practice to purchase from the contractor such creosote as we may require for the treatment of our material. This has worked out to our advantage because the foreign creosote has been of a better quality than the domestic supply and at a lower cost. There has also been the incidental advantage to us because under this arrangement the contractor assumes all the loss from evaporation and the gradual accumulation of sludge. The contractor uses foreign creosote by reason of its lower cost and the fact that the foreign oil, containing lower percentage of heavy residue, makes for cleaner treated material which is an essential in the competitive commercial treatment market.



Sept. 25, 1936.

The contractor is not agreeable to mixing domestic creosote which we may furnish in his storage tanks. The proposal, however, does provide that the contractor will set aside a 300,000-gallon storage tank for our use in case we should decide to provide domestic creosote delivered either by rail or by vessel. In view of this, the creosote situation has no bearing on the acceptance or rejection of this proposal, and we can use domestic creosote if for any reason that should be desirable. The comparative creosote costs are shown in Statement #7.

The Milwaukee, whose ties are treated by this same company at Eagle Harbor plant, likewise furnish the preservative and they have under the same arrangements as prevail with us purchased their creosote from the treating company. The Milwaukee have been approached to use domestic creosote instead of foreign oil, and after an investigation of all phases of the subject they declined to change their practice. The Southern Pacific likewise use foreign oil, delivered by vessel on the Pacific Coast and shipped to their plant inland by rail. The Santa Fe, years ago, used foreign oil but in recent years they have purchased domestic creosote delivered by vessel at National City and Galveston and shipped to their inland plants by rail. The Santa Fe creosote specifications however require a creosote with a considerably less residue than we have heretofore used.

The costs of treatment at Paradise, in a more pronounced manner than existed ten years ago, dictate the plane of comparison for contract treatment at Seattle. Statement 1- A shows the cost of treatment, the cost of ties and incidental cost for ties treated under the proposed contract. Statement #2 shows similarly cost of Inland Empire ties treated at Paradise and shipped to the Coast. These two statements, of course, take into consideration the difference in the untreated tie costs. At present there is a differential of \$1 per MFTM. These two costs are essentially the same. These comparisons use the normal figures of out-of-pocket transportation costs for hauling company material. It is not necessary here to discuss the reasons for the assumptions made in determining out-of-pocket costs. There is always an unknown element dealing with the fluctuating car supply situation which is important in long hauls. I should call attention to the somewhat indefinite assumptions which it has been necessary to make on the extra cost of hauling ties through the joint account territory south of Seattle, utilized in the set-ups for the St. Helens plant, in the next attached memorandum. Statement #3 shows the probable cost on the same basis of using Coast Douglas Fir ties, shipping them to Paradise for treatment and returning them to the Coast. This is 6.53¢ in excess of the proposed contract cost and would amount to about \$13,000 per year in increased cost. This would obviously be somewhat abnormal method of handling ties by reason of the long eastbound haul and might be particularly troublesome in periods of car shortage.

The contractor is agreeable to contract on a year-to-year basis. He is not willing to accept a ten year contract, by reason of the upward trend of commodity and labor costs. The contractor, however, will agree to a contract for a five year period. In view of all the circumstances I consider the proposal as very satisfactory and advantageous and therefore recommend its acceptance on the basis of a five year period.

L. YAGER

MEMORANDUM

Saint Paul, Minn.,  
September 22, 1936w

COMMENTS ON COMPETITIVE ASPECTS OF TREATING PLANTS ON PACIFIC COAST:

(A) Union Pacific Treating Plant at The Dalles, Oregon:

This plant is owned by the Union Pacific, and was leased recently to the Forest Products Treating Company, of Portland. They treat ties and timber for the Union Pacific, and carry on quite an extensive commercial treating business. If this plant were to be considered for treating Northern Pacific ties, it would be necessary to haul the untreated ties and treated ties thru the joint account territory between Seattle and Portland. There would also be an increased haul on both the green and treated ties over and above the present average haul. These items would amount to 8.64¢ per tie, or \$2.31 per MFEM. The present freight rate, Portland to The Dalles, is 9¢ per cwt. plus 1-1/2¢ for treating in transit. Assuming that it might be possible to negotiate a special rate for treatment of Northern Pacific ties equal to the present one-way local rate, then the foreign-line freight charge would amount to 13.44¢ per tie or \$3.57 per MFEM. The total extra cost would amount to 22.08¢ per tie or \$5.88 per MFEM. It is clearly out of the question to assume that the treating company would consider reducing their charge of treating \$5.88 below the Seattle price of \$6.25 per MFEM.

(B) St. Helens, Oregon:

This plant is located on the Columbia River, and on the tracks of the SP&S at St. Helens. The plant is owned and operated by the McCormick Lumber Company. This concern submitted a bid, under date of April 21, 1926, at the time the present Seattle contract was under consideration. Their treating cost proposal was considerably higher than the Colman bid. Their proposal was not quite definite so that I met their manager, Mr. Osborne, in Tacoma in May of that year for a further explanation of their proposal. It developed that the creosoting company contemplated that the Northern Pacific would deliver untreated ties at St. Helens either by rail via the SP&S, or by water from Kalama dock. The creosoting company were to unload the green ties at their plant and load the treated ties into cars at Kalama; the railway company was to bear the cost of barging the cars between St. Helens and Kalama. The best figure we could estimate at that time was that the barge cost would be \$1 per MFEM.

If the ties were to be handled to and from the plant by rail via the SP&S from Willbridge, then the cost of hauling thru joint account territory, and the extra haul over and above the present average haul to and from the Seattle plant would be 8.64¢ per tie or \$2.31 per MFEM. The present local rate between Willbridge and St. Helens is 6 1/2¢ in each direction, plus 1-1/2¢ for treating in transit. Assuming that a special rate might be developed, equivalent to 75% of the two locals, the rail transportation charge would amount to 14.40¢ per tie or \$3.86 per MFEM, a total of 23.04¢ per tie or \$6.17 per MFEM. Any contract on this basis of handling by rail is clearly out of the question.



Some approximate figures on the probable cost of handling by water between Kalama and St. Helens, the Northern Pacific bearing the water transportation cost, and the extra switching at Kalama, have been made. It would cost 6.654¢ per tie for handling thru the joint account territory, and the extra haul on green and treated ties. Adding thereto probable water transportation and extra switching, gives a total cost of 15.114¢ per tie or \$4.04 per MFEM. It is inconceivable that this company would make a treating price \$4.04 lower than the \$6.25 charge of the Seattle plant, or a treating price of \$2.21 per MFEM.

The St. Helens plant has no facilities for storage of seasoned ties, so that our ties would have to be seasoned in the cylinders, and we would likewise be confronted with the problem of getting delivery of green ties at a fairly uniform rate throughout the treating period.

Statement #14 shows prices paid by the SP&S for treating ties at St. Helens and Hillyard during years 1932 and 1936. The treating costs for the year 1936 at both places was \$8.50 per MFEM or \$2.00 higher than the present charge to the N.P. at Seattle. All these ties were offered green, and therefore required seasoning in the cylinders.

(C) Hillyard Plant, near Spokane, Wash.

This plant was constructed by the Great Northern about ten years ago, and leased for a period of ten years to the Washington Wood Preserving Company. That contract expires May 1, 1937, when the plant will be taken over by the National Pole and Treating Company for a period of five years.

Statement #9 gives comparison of unit prices as between N. P. contract at Seattle, G. N. present contract, and the G. N. contract dated June 1, 1936, effective as of May 1, 1937.

Statement 9-A is a similar comparison except that for the N. P. the proposed contract at Seattle is included in the first column. The comparisons are drawn on the basis of cost of an average tie, which is No. 4, 7x8-8', and also on the basis of cost per M.FEM. The Northern Pacific at Seattle is concerned almost exclusively with Douglas Fir ties, whereas the G. N. treat a considerable percentage of other species of wood.

Comparison of direct unit costs are not conclusive because of the contract arrangements with respect to the rental payments for the use of the plant, which in this instance is also devoted to the handling of considerable commercial business.

On Statement #13 I have attempted to show the costs to the G. N. and likewise to the contractor. The effect of the rental payment would vary somewhat by the amount of material treated for the G. N. Under the present contract the G. N. offers an average of 2,000,000 cubic feet per year, but by reason of their having used treated ties for about ten years the demand in the future will drop off very

materially so that I have assumed an average of slightly less than 1,750,000 cubic feet per year, which means a rental return of \$35,000 per year. Comparisons are on the basis of an average tie, and treating Douglas Fir. In the first portion of the setup I have immediately eliminated the rental on the assumption that the entire rental payment is charged out against the G. N. output, which is somewhat extreme because the commercial business should participate in its portion of the rental expenses. That setup for the moment assumes that the obligations of plant ownership are not a charge against either the Railway Company or the Contractor. The contract provides that the G. N. shall likewise bear all the taxes chargeable against the property and the treating operations.

From our own experience and that of the contract treating at Seattle, we have accumulated fairly accurate data on the contractor's costs for these operations. In the summary on Sheet 2 of Statement #13 I have restated these calculations to recognize the financial obligations attaching to plant ownership. The G. N. has made the investment of something in excess of \$500,000 which carries an interest charge of 5% on the depreciated principal. The depreciation rate is assumed at 3% per year. The total gross cost to the G. N. is \$10.75 per MFEM or 39.92¢ per tie. Crediting these items with rental received from the contractor we have a net cost of \$9.09 per MFEM or 33.70¢ per tie. This is 44.56% in excess of the N. P. cost under proposed new contract. The cost to the contractor has been worked thru in similar fashion and shows profit of 59.48% on his total cost.

It has not been possible to obtain any reliable figures on the amount of forest products treated commercially at Hillyard. The statement was made that the active cylinder time was about equal as between G. N. business and commercial business. The G. N. volume has averaged 2,000,000 cu. ft. per year. The commercial business has a lower cylinder capacity rating so that if we assume a rating of 60% there would have been treated 1,200,000 cu. ft., or 14,400,000 FEM per year. The average haul on this commercial material will probably return a rate of about 50 cents per cwt., suggesting a freight revenue of about \$216,000 per year to the G. N. in commercial business from this plant.

There are no treating-in-transit rates from the N. P. to the Hillyard plant. There is, however, a published switching charge of \$3.60 per car, which amounts to 1.8¢ per tie. If treatment of Northern Pacific ties at Hillyard were to be given consideration, then the comparison must be with the N. P. plant at Paradise. To bring the treating costs at Hillyard on a comparable basis with the Paradise costs, Hillyard treating costs would have to be \$3.56 per MFEM or 13.28¢ per tie, which is clearly out of the question. There is no evident purpose for the N. P. to consider having its ties treated at Hillyard as long as the Paradise plant is located only 188 miles to the east.



(D) Construction of New Treating Plant:

When the proposal to treat ties on the Coast was up ten years ago, several concerns offered proposals based on the construction of new plants. At that time there was a prospect of obtaining Coast business of the G. N. and the Milwaukee, in addition to the N. P. requirements. These proposals failed because they were either out of line with the Colman bid, or they required a guarantee of volume which could not be met. The N. P. volume will be considerably less in the future than it has been, and the G. N. and Milwaukee business is not available, and there is therefore no prospect that any one would consider making an investment in a new treating plant, particularly since there is already an excess of treating capacity for the commercial business originating on the Coast.

(E) Treatment of commercial forest products in the Coast territory:

The treatment of forest products on the North Pacific Coast for use at local ports, and for shipment by water for domestic use or export to the Orient, is confined to the St. Helens plant and the two plants of the West Coast Wood Preserving Company, namely, at Seattle and at Eagle Harbor. There is also a plant under Canadian ownership located at Vancouver, B. C. A considerable quantity of forest products originating on the North Pacific Coast is treated in transit for movement to the interior, mostly to states west of the Mississippi River. This business is participated in by the St. Helens plant, the plant at The Dalles, Ore., the two plants of the West Coast Wood Preserving Company, and the plant at Hillyard, Washington. The Northern Pacific participates only in the haul on this business from the output of the West Coast Wood Preserving Company. The number of cars of treated forest products for the year 1935 and the first six months of 1936 is shown on statement #12. This business is divided between the Northern Pacific, Union Pacific, Great Northern, and Milwaukee. This statement shows that the amount allocated to the Northern Pacific is 51.3%.

The commercial plants at Hillyard and The Dalles, Ore., are not in a position to participate in the treating in transit of forest products used on the Coast or shipment by water from Puget Sound points.

L. YAGER

ESTIMATED COST OF TREATED TIE TREATED UNDER CONTRACT AT SEATTLE  
AND DELIVERED TO THE DIVISIONS. BASED ON 300,000 TIES PER YEAR  
(EQUIVALENT 7" x 8" - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green tie 37-1/3 FEM at \$12	\$ .4480
2. Sales tax at 2% on 75%	.0067
3. Cost of contract treatment	.2600
4. Cost of creosote 1.35 gallons at \$.1326	.1790
5. Cost of petroleum 1.65 gallons at \$.021	.0347
6. Treating supervision, \$2400	.0080
Sub Total	<u>\$ .9364</u>

(B) INTEREST AND TAXES:

1. Interest on preservatives \$56,650 at 6% for 6 months \$1579.50	\$ .0054
2. Taxes on preservatives \$26,325 at 32% x .0355	.0010
3. Taxes on seasoning ties \$.4547 at 32% x .0355	.0052
4. Interest on seasoning ties \$.4547 at 6% - 12 months	.0273
	<u>\$ .0389</u>

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 148 miles, 125 lbs. at \$.003	\$ .0278
2. Haul treated tie average haul 100 miles, 130 lbs. at \$.00225	.0146
Sub Total	<u>\$ .0424</u>

SUMMARY:

A. Direct Costs	\$ .9364
B. Interest and Taxes	.0389
C. Indirect items, Freight, etc.	.0424
Totals	<u>\$1.0177</u>

Seattle, Wash.  
August 30, 1936w



Statement 1-A

ESTIMATED COST OF TREATED TIES UNDER PROPOSED NEW CONTRACT AT SEATTLE AND DELIVERED TO THE DIVISIONS. NO MAXIMUM AMOUNTS SPECIFIED IN PROPOSED CONTRACT. (EQUIVALENT 7x8 - 8').

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green tie, Douglas fir, 37-1/2 FEM x \$12.	\$.4480
2. Sales tax at 2% on 75%	.0067
3. Cost of contract treatment, at \$6.25 M.FEM	.2331
4. Cost of creosote, 1.35 gal. x \$.1326	.1790
5. Cost of petroleum, 1.65 gal. x \$.021	.0347
6. Treating supervision, \$2400.	.0080
Sub Total	\$.9095

(B) INTEREST AND TAXES:

1. Interest on preservatives, \$52650 x 6% for 6 months,	
\$1579.50	\$.0054
2. Taxes on preservatives, \$26325 x 32% x .0355	.0010
3. Taxes on seasoning ties, \$.4547 x 32% x .0355	.0052
4. Interest on seasoning ties, \$.4547 x 6%, 12 months	.0273
Sub Total	\$.0389

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 148 miles,	
125 lbs. x \$.003	\$.0278
2. Haul on treated ties, average haul 100 miles,	
130 lbs. x \$.00225	.0146
Sub Total	\$.0424

SUMMARY:

A. Direct Cost of Ties and Treatment	\$.9095
B. Interest and Taxes	.0389
C. Indirect Items, Freight, Etc.	.0424
Total	\$.9908

Asst. Chief Engineer  
St. Paul, Minnesota  
September 17, 1936w

ESTIMATED COST OF TREATING INLAND EMPIRE TIES AT PARADISE AND SHIPPING  
TO SEATTLE PLANT TERRITORY. BASED ON 300,000 TIES PER YEAR.  
(EQUIVALENT 7x8 - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green ties 37-1/3 FBM at \$13.	\$ .4850
2. Cost of treatment (direct items)	.3531
3. Cost of treatment (indirect tax)	.0037
4. Cost of treatment (indirect overhead etc.)	.0236
Sub Total	\$ .8654
Interest and depreciation on investment (\$.0220)	

(B) INTEREST AND TAXES:

1. Interest on seasoning ties, \$.485 at 6% - 12 months	\$ .0291
2. Taxes on seasoning ties, \$.485 at 1.63%	.0079
Sub Total	\$ .0370

(C) INDIRECT ITEMS, FREIGHT ETC.:

1. Haul on green ties, average haul 146 miles, 125 lbs. at \$.003	\$ .0274
2. Haul on treated ties, average haul 662 miles, 130 lbs. at \$.0015	.0645
Sub Total	\$ .0919

SUMMARY:

A. Direct Cost	\$ .8654
B. Interest and Taxes	.0370
C. Indirect Items, Freight, Etc.	.0919
Total	\$ .9943

At Seattle, Wash.  
August 30, 1936  
Revised St. Paul, Minn.  
September 17, 1936w



Statement #3

ESTIMATED COST OF TREATING COAST FIR TIES AT PARADISE AND SHIPPING  
BACK TO SEATTLE PLANT TERRITORY. BASED ON 300,000 TIES PER YEAR.  
(EQUIVALENT 7x8 - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green ties 37-1/3 FEM at \$12.	\$.4480
2. Sales tax - does not apply	-
3. Cost of treatment (direct items)	.3531
4. Cost of treatment (indirect tax)	.0037
5. Cost of treatment (indirect overhead etc.)	.0236
Sub Total	<u>\$.8284</u>
Interest and depreciation on investment (\$.0220)	

(B) INTEREST AND TAXES:

1. Interest on seasoning ties \$.448 at 6%, 12 months	\$.0269
2. Taxes on seasoning ties \$.448 at 1.63%	.0073
Sub Total	<u>\$.0342</u>

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 688 miles, 125 lbs. at \$.003	\$.1290
2. Haul on treated ties, average haul 662 miles, 130 lbs. at \$.0015	.0645
Sub Total	<u>\$.1935</u>

SUMMARY:

A. Direct costs	\$.8284
B. Interest and taxes	.0342
C. Indirect items, freight, etc.	.1935
Total	<u>\$1.0561</u>

At Seattle, Aug. 30, 1936  
Revised, St. Paul, Minn.,  
September 17, 1936w

ESTIMATED COST OF TREATING TIES, NORMAL PROGRAM, AT PARADISE,  
BASED ON 450,000 TIES PER YEAR. (EQUIVALENT 7x8 - 8')

(A) DIRECTLY ASSIGNABLE ITEMS:

1. Creosote 1.35 gal. at \$.128 plus Co. freight \$.008	\$ .1836
2. Petroleum 1.65 gal. at \$.021 plus freight \$.0279	.0460
3. Unloading and cross piling	.0200
4. Loading for transfer to machines	.0140
5. Handling through machines	.0180
6. Loading for shipment	.0120
7. Fuel, coal at \$1.10 per ton, plus Co. frt \$.0015	.0110
8. Plant labor (operation and repairs) \$15172.04	.0337
9. Supervision (local) \$ 3801.90	.0084
10. Supervision (general) \$ 5144.76	.0112
11. Material and supplies	.0049
12. Maintenance of tracks and bldgs., \$ 2500.00	.0055
Sub Total	<u>\$ .3683</u>

(B) INDIRECT OVERHEAD ETC.:

1. Interest on investment \$185,534 x 6% (\$11,132.04)	\$ .0247
2. Depreciation on plant \$189,354 x 3% (\$ 5,380.62)	.0120
3. Taxes on plant, year 1935 - \$280.73	.0006
4. Insurance on plant, 1935 premium, \$147.57	.0003
5. Interest on preservatives \$90,450 x 6% x 1 mo. (\$452.25)	.0010
6. Taxes on preservatives - included in (3)	-
7. Insurance on preservatives - Included in (4)	-
Sub Total	<u>\$ .0386</u>

(C) INDIRECT TAXES:

1. Federal Retirement Act, 3-1/2% x Payroll(\$.1173)	\$ .0041
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SUMMARY:

A. Directly Assignable Items	\$ .3683
B. Indirect overhead, etc.	.0386
C. Indirect Taxes	.0041
Total Cost	<u>\$ .4110</u>

At Seattle, Wash., Aug. 30, 1936.  
Revised, St. Paul, Minn.  
September 17, 1936w



ESTIMATED COST OF TREATING TIES, NORMAL PROGRAM OF 450,000 TIES  
PLUS 300,000 SEATTLE TIES AT PARADISE, TOTAL 750,000 TIES  
(EQUIVALENT 7x8 - 8')

(A) DIRECTLY ASSIGNABLE ITEMS:

1. Creosote 1.35 gal. x \$0.128 plus Co. Frt. \$.008	\$.1836
2. Petroleum 1.65 gal. x \$.021 plus Frt. \$.0279	.0460
3. Unloading and cross piling	.0200
4. Loading for transfer to machines	.0140
5. Handling through machines	.0180
6. Loading for shipment	.0120
7. Fuel, coal at \$1.10 per ton plus Co. Frt. \$.0015	.0110
8. Plant labor (operation and repair) \$21,110.64	.0281
9. Supervision (local) \$ 3,961.05	.0053
10. Supervision (general) \$ 5,144.76	.0069
11. Material and supplies	.0049
12. Maintenance of tracks and bldgs. \$ 2,500.00	.0033
Sub total	<u>\$.3531</u>

(B) INDIRECT OVERHEAD ETC.:

1. Interest on investment, \$185,534 x 6% (\$11,132.04)	\$.0148
2. Depreciation on plant, \$179,354 x 3% (\$ 5,380.62)	.0072
3. Taxes on plant, year 1935 - \$280.73	.0004
4. Insurance on plant, 1935 premium, \$147.57	.0002
5. Interest on preservatives, \$90,450 x 6%	.0010
6. Taxes on preservatives - included in (3)	-
7. Insurance on preservatives - included in (4)	-
Sub total	<u>\$.0236</u>

(C) INDIRECT TAXES:

1. Federal Retirement Act, 3-1/2% of payroll (\$.1043)	\$.0037
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SUMMARY:

A. Directly assignable items	\$.3531
B. Indirect overhead, etc.	.0236
C. Indirect Tax	.0037
Total Cost	<u>\$.3804</u>

Seattle, Wash., Aug. 30, 1936  
Revised, St. Paul, Minn.  
September 17, 1936w

Statement #6

ESTIMATED SEGREGATION OF COSTS TO CONTRACTOR ON TREATING MATERIAL AT SEATTLE PLANT, FOR CROSS TIES ONLY. BASED ON AVERAGE OF 300,000 PCS. 7x8 - 8' TIE EQUIVALENTS PER YEAR.

Contract price \$6.50 per M. for 12 hr. treatment is equivalent to \$.243 per tie (7x8 - 8')

Actual price paid contractor for treatment of all cross ties to August 1, 1936 was \$.2600 per tie covering all additional charges for overtime.

(A) DIRECTLY ASSIGNABLE COSTS:

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyer	.00250
3. Conveyor work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - steam power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and supplies, track and bldg. maintenance	.01590
Sub Total	<u>\$.08840</u>

(B) DIRECTLY ASSIGNABLE TAXES:

1. State Industrial Tax and Workman's Compensation, \$.0215 per hour	\$.0017
2. Federal Social Security Act, 2.1% of Labor	.0011
3. Business and Occupational Tax, 1/4% on Gross Business	.0008
Sub Total	<u>\$.0036</u>

(C) OVERHEAD, ETC.:

1. General and plant supervision	\$.0120
2. Amortization of plant, \$300,000 in ten years.	.1000
3. Interest on investment, \$300,000 x 6%	.0330
4. Taxes on plant	.0120
5. Insurance on plant	.0010
Sub total	<u>\$.1580</u>

SUMMARY:

A. Directly Assignable Costs	\$.0884
B. Directly Assignable Taxes	.0036
C. Overhead, etc.	.1580
Total	<u>\$.2500</u>
Payments received	.2600
Profit	<u>\$.0100</u>
Profit Percent of cost	4%

Seattle, Wash., Aug. 30, 1936.  
Revised St. Paul, Minn.  
September 17, 1936w



Statement #7

COMPARATIVE CREOSOTE AND PETROLEUM PRICES BASED ON QUOTATIONS CURRENT  
FOR YEAR 1936.

(A) COSTS DELIVERED AT PARADISE:

1. Lehigh, 20% x \$.11-1/2	\$.0230
2. Domestic, 80% x \$.13-1/8	.1050
3. Average cost per gallon	<u>\$.1280</u>
4. Company freight, St. Paul, at \$.0015 = \$.0088 at 80%	.0070
5. Company freight, Lehigh, at \$.0015 = \$.0051 at 20%	<u>.0010</u>
6. Total cost, average company freight	.0080
7. Total cost, incl. company freight (3) plus (6)	.1360

(B) COST DELIVERED AT SEATTLE:

1. Foreign oil at \$.13	\$.1300
2. Washington sales tax at 2%	<u>.0026</u>
3. Total cost delivered	.1326

(C) PETROLEUM AT PARADISE:

1. Cost of oil at \$.021	\$.0210
2. Company freight 7.87 lbs., 584 miles, at \$.003	<u>.0069</u>
3. Total cost	\$.0279

(D) PURCHASE DOMESTIC CREOSOTE OIL FOR SEATTLE CONTRACT:

1. From sources, Chicago and East	\$.12375
2. Foreign line freight propn. Chicago to Seattle	.01507
3. N.P. haul, St. Paul to Seattle, 1904 miles at \$.0015	<u>.01241</u>
Total cost in N.P. tank cars	\$.15123

Cost of creosote purchased from same sources, hauled in  
sellers' cars and Railway Company paying mileage on cars    \$.15819

Note:    Item (D) set up from prices furnished by Purchasing Department.

Seattle, Wash., Aug. 30, 1936.  
Revised St. Paul, Minnesota  
September 17, 1936w.

Statement #8

STATEMENT OF MATERIAL TREATED UNDER CONTRACT AT SEATTLE

<u>Year</u>	<u>No. Ties</u>	<u>Ties FEM</u>	<u>Per Cent</u>	<u>Switch Tie</u>		<u>Piling &amp; Timber</u>		<u>TOTAL FEM</u>
				<u>FEM</u>	<u>%</u>	<u>FEM</u>	<u>%</u>	
1927	176,045	6,572,346	73.2	595,602	6.6	1,805,958	20.2	8,973,906
1928	468,231	17,480,622	88.1	1,063,188	5.4	1,303,680	6.5	19,847,490
1929	405,893	15,153,337	89.4	1,262,814	7.4	533,988	3.2	16,950,139
1930	262,784	9,810,602	93.9			637,434	6.1	10,448,036
1931	223,030	8,326,453	83.1	1,240,848	12.4	458,094	4.5	10,025,395
1932	244,255	9,118,853	88.7	719,964	7.0	438,816	4.3	10,277,633
1933	102,963	3,843,952	80.6	560,868	11.8	366,786	7.6	4,771,606
1934	246,455	9,200,986	91.2	653,100	6.5	240,072	2.4	10,094,158
1935	112,276	4,191,637	79.4	617,064	11.7	469,812	8.9	5,278,513
1936*	276,582	10,325,727	84.2	1,448,034	11.8	484,764	4.0	12,258,525
<b>TOTAL</b>	<b>2,518,514</b>	<b>94,024,515</b>	<b>86.3</b>	<b>8,161,482</b>	<b>7.5</b>	<b>6,739,404</b>	<b>6.2</b>	<b>108,925,401</b>
1936	340,000	12,693,322		500,000				13,193,322
<b>TOTALS</b>	<b>2,858,514</b>	<b>106,717,837</b>		<b>8,661,482</b>				<b>122,118,723</b>

\*Includes up to August 1st, 1936.

Seattle, Wash.  
August 30, 1936w\*



COMPARISONS OF UNIT PRICES FOR TREATED CROSS TIES, SWITCH TIES, TIMBER, ETC., AS BETWEEN THE NORTHERN PACIFIC CONTRACT WITH WEST COAST WOOD PRESERVING CO. AT SEATTLE, AND THE GREAT NORTHERN CONTRACTS AT HILLYARD.

	N.P.Cont. Jan 1'27	G.N.Cont. June 1'36	G.N.Cont. June '26
1. Cross ties, Douglas or Inland Fir, Ft. B.M.	\$6.50	\$8.96	\$8.33
2. Cross ties, Douglas Fir, equivalent 7x8-8'	.2407	.3319	.3085
3. Cross ties, Tamarack or Larch, FEM	6.50	7.92	8.33
4. Cross Ties, Tamarack or Larch, pr.Tie	.2407	.2933	.3085
5. Cross ties, Lodge pole or Ponderosa Pine, Ft. EM	6.50	7.50	8.33
6. Cross ties, Lodge Pole or Ponderosa Pine, per tie	.2407	.2777	.3085
7. Switch ties, Fir and Larch, FEM	8.00	12.00	12.00
8. Switch ties, Pine, FEM	-	10.00	12.00
9. Bridge timber, Lumber, Fir & Larch, FEM	10.45	12.00	12.00
10. Bridge Timber Lumber, Pine, FEM	-	10.00	12.00
11. Piling, Fir & Larch, per cu.ft.	.14	.15	-
12. Piling, cedar, per cu. ft.	-	.14	-
13. Piling, pine, per cu. ft.	-	.13	-
14. Cross ties, green, FEM (fir)	7.52	10.62	-
15. Cross ties, green, per tie (fir)	.2785	.3933	-
16. Switch ties, green, FEM (fir)	9.02	13.66	-
17. Bridge timber lumber, green, FEM (fir)	11.47	13.66	-
18. Bridge timber lumber, green, (usual lots fir) FEM	11.72	13.66	-
19. Bridge timber lumber, green (small lots fir) FEM	13.05	13.66	-
20. Piling, green fir, per cu.ft.	.2012	.17	-

Note: Item 18 based on 30,000 FEM or over. Item 19 based on charges less than 30,000 FEM. Item 20 based on treating green piling requiring total cylinder time 42 hrs.

The copy of G.N. June 1926 contract is not complete as to schedule of prices.

Note: GN June 1, 1936 contract provides that contractor shall pay to the GN rental for plant of \$50,000 per year in case G.N. offers for treatment 1,750,000 cu. ft. or 21,000,000 FEM. This equal to 561,736 cross ties 7x8-8'. The rental therefore is equal to about 9 cents per tie. The GN guarantees to offer for treatment 1,500,000 cu.ft. per year. In the event less than 1,750,000 cu.ft. is offered the rental drops to \$35,000 per year. A rental of \$35,000 applied to 1,500,000 cu.ft. of cross ties is equal to 482,312 pcs. 7x8-8' ties or 7.2 cents per tie.

The G.N. contract provides that the G.N. shall, in addition, assume the cost to the contractor of all taxes, contributions, or assessments imposed by Federal Social Security Act or any similar acts in the State of Washington, etc.

The N.P. Seattle contractor has an investment of about \$300,000 in treating plant and seasoning yard. The depreciation charge based on ten-year period is ten cents per tie.

SEATTLE WASH.

AUGUST 30, 1936w

Statement 9-A.

COMPARISON OF UNIT PRICES FOR TREATING CROSS TIES, SWITCH TIES, TIMBER, ETC., AS BETWEEN PROPOSED CONTRACT BETWEEN NORTHERN PACIFIC RAILWAY AND WEST COAST WOOD PRESERVING COMPANY AT SEATTLE, AND THE GREAT NORTHERN CONTRACTS AT HILLYARD.

	Proposed		
	N.P.Cont.	G. N. Contracts	
	Jan. 1, 1937	June 1, 1936	June, 1926
1. Cross ties, Douglas or Inland Fir, M.FEM	\$6.25	\$8.96	\$8.33
2. Cross ties, Douglas fir equivalent 7x8-8', per tie	.2331	.3319	.3085
3. Cross ties, Tamarack or Larch, M.FEM	6.25	7.92	8.33
4. Cross ties, Tamarack or Larch, 7x8-8' per tie	.2331	.2933	.3085
5. Cross ties, Lodgepole or Ponderosa Pine, M.FEM	6.25	7.50	8.33
6. do do do (7x8-8') per tie	.2331	.277	.3085
7. Switch ties, Fir and Larch, M.FEM	8.00	12.00	12.00
8. Switch ties, Pine, M.FEM	-	10.00	12.00
9. Bridge timber, lumber, Fir & Larch, M.FEM	10.20	12.00	12.00
10. Bridge timber, Lumber, Pine, M.FEM	-	10.00	12.00
11. Piling, Fir and Larch, per cu. ft.	.14	.15	-
12. Piling, cedar, per cu. ft.	-	.14	-
13. Piling, pine, per cu. ft.	-	.13	-
14. Cross ties, green, fir, M.FEM	6.25	10.62	-
15. Cross ties, green, fir, per tie (7x8-8')	.2331	.3933	-
16. Switch ties, green, fir, M.FEM	8.00	13.66	-
17. Bridge timber, lumber, fir, green, M.FEM	11.22	13.66	-
18. Bridge timber, lumber, green, fir, (usual lots) M.FEM	11.47	13.66	-
19. Bridge timber, lumber, green, fir, (small lots) M.FEM	12.85	13.66	-
20. Piling, green fir, per cu. ft.	.2012	.17	-

Note - Item 18 based on 30,000 ft. FM or over.

Item 19 based on charges less than 30,000 FEM.

Item 20 based on treating green piling requiring a total cylinder time of 42 hours.

The copy of G. N. June 1926 is not complete as to schedule of prices.

Note - The G. N. June 1, 1936 contract provides that contractor shall pay to the G. N. rental for plant of \$50,000 per year in case G. N. offers for treatment 1,750,000 cu. ft. or 21,000,000 FEM. This is equal to 561,736 cross ties, 7x8 - 8'. If all the rental were to be absorbed by the G. N. material treated is equal to 8.72¢ per tie. The G. N. guarantees to offer for treatment 1,500,000 cu. ft. per year. In the event less than 1,750,000 cu. ft. is offered the rental drops to \$35,000 per year. A rental of \$35,000 absorbed by the G. N. 1,500,000 cu. ft. or equivalent 482,186 cross ties would amount to 7.26¢ per tie.



Statement 9-A,  
page 2.

Summarizing the various rental absorptions:

1. Rental \$50,000 for 2,000,000 cu. ft. = 2.5¢ per cu. ft., = \$2.08 per M.FEM,  
= 7.777¢ per tie.
2. Rental \$50,000 for 1,750,000 cu. ft. = 2.85¢ per cu. ft. = \$2.375 per M.FEM,  
= 8.866¢ per tie.
3. Rental \$35,000 for 1,750,000 cu. ft. = 2.00¢ per cu. ft. = \$1.666 per M.FEM,  
= 6.222¢ per tie.
4. Rental \$35,000 for 1,500,000 cu. ft. = 2.333¢ per cu. ft. = \$1.941 per M.FEM,  
= 7.258¢ per tie.

The G. N. contract of June 1, 1936 effective May 1, 1937 for a period of five years provides that the G. N. shall assume the usual taxes and in addition assume the cost to the contractor of all taxes, contributions, or assessments imposed by Federal Social Security Act, or any similar acts in the State of Washington, etc.

The N. P. Seattle contractor has an investment of about \$300,000 in treating plant and seasoning yard. Based on 300,000 ties per year the amortization in ten years is 10¢ per tie, interest on investment at 6% is 3.53¢ per tie.

Asst. Chief Engr.  
St. Paul, Minn.  
September 14, 1936w

Statement #10

APPROXIMATE ESTIMATE OF AMOUNT OF FOREST PRODUCTS MATERIAL TO BE TREATED AT SEATTLE. TREATED TIES REQUIRED BASED ON ROUGH ESTIMATE OF UNTREATED TIES IN TRACK IN TERRITORY WEST OF YAKIMA AND PROBABLE RENEWALS OF TREATED TIES PLACED SINCE 1908. SWITCH TIES BASED ON ADJUSTED AVERAGE OF LAST FIVE YEARS. LUMBER AND PILING BASED ON AVERAGE OF LAST TEN YEARS.

Renewal Year	Ties			Switch Ties		Piling & Timber		Total M.FBM
	Number	M.FBM	%	M.FBM	%	M.FBM	%	
1937	220,000	8,213	88	500	5	600	7	9,313
1938	158,000	5,899	84	500	7	600	9	6,999
1939	164,000	6,123	85	500	7	600	8	7,223
1940	170,000	6,347	85	500	7	600	8	7,447
1941	180,000	6,720	86	500	6	600	8	7,820
1942	190,000	7,093	87	500	6	600	7	8,193
1943	203,000	7,579	87	500	6	600	7	8,679
1944	220,000	8,213	88	500	5	600	7	9,313
1945	238,000	8,885	89	500	5	600	6	9,985
1946	254,000	9,483	90	500	5	600	5	10,583
TOTALS	1,997,000	74,555	87	5,000	6	6,000	7	85,555

Assistant Chief Engineer  
St. Paul, Minnesota  
September 10, 1936w



QUANTITIES OF MATERIALS TREATED AND AMOUNTS PAID SEATTLE TREATING PLANT 1927 TO AUGUST 1, 1936.

YEAR	CROSS TIES			SWITCH TIES			LUMBER			PILING			TOTAL
	M.FEM	AMT. PAID	% :	M.FEM	AMT. PAID	% :	M.FEM	AMT. PAID	% :	LIN. FT.	AMT. PAID	% :	
1927	7,156	\$ 48,072	53	596	\$ 5,837	6	361	\$11,057	12	83,325	\$26,077	29	\$ 91,043
1928	18,576	124,687	80	1,063	10,536	7	511	5,212	3	66,380	15,503	10	155,938
1929	15,985	105,512	83	1,263	12,206	10	301	3,476	3	21,235	5,409	4	126,603
1930	10,278	67,658	86	-	-	-	520	8,958	11	9,138	2,076	3	78,692
1931	8,496	56,158	74	1,241	11,857	15	319	7,020	9	6,847	1,255	2	76,290
1932	9,583	62,924	86	720	6,480	9	197	2,545	4	3,611	848	1	72,797
1933	4,019	26,263	75	561	4,814	14	190	2,484	7	8,415	1,459	4	35,020
1934	9,590	62,598	91	653	5,328	8	38	508	1	1,290	274	-	68,708
1935	4,343	28,418	82	617	4,957	14	110	1,525	4	-	-	-	34,900
1936	11,137	72,852	85	1,240	10,499	12	180	2,335	3	-	-	-	85,686
TOTAL	99,163	\$655,142	79	7,954	\$72,514	9	2,727	\$45,120	6	200,241	\$52,901	6	\$825,677
Avge per MFEM		\$6.61		MFEM	\$9.12		M.FEM	\$16.55		Lin.Ft.	\$ .26		
Avge Cost per Tie		\$ .26											

Asst. Chief Engineer  
St. Paul, Minn.  
September 10, 1936w

Statement #12

RECORD OF COMMERCIAL LOADS OF TREATED FOREST PRODUCTS FROM THE SEATTLE PLANT OF THE WEST COAST WOOD PRESERVING COMPANY, TAKEN FROM THE RECORDS OF THE WOOD PRESERVING COMPANY BY G. R. HOPKINS, ASSISTANT GENERAL SUPERINTENDENT, TIMBER PRESERVATION, DURING AUGUST, 1936. SHORT HAULS WAS CONSIDERED AS BEING WEST OF BUTTE, AND TRANSCONTINENTAL AS EAST OF BUTTE.

<u>Year 1935</u>	<u>N. P.</u>	<u>%</u>	<u>:</u>	<u>U. P.</u>	<u>G. N.</u>	<u>Milw.</u>	<u>Total</u>
Transcontinental	46	45		26	13	17	102
Short Haul	38	51		4	21	12	75
Totals	84	47		30	34	29	177

<u>Year 1936 - 1st 6 months</u>							
Transcontinental	29	56		10	8	5	52
Short Haul	67	55		10	34	10	121
Totals	96	55		20	42	15	173

<u>Year 1936 - July 1st to Aug. 17th:</u>							
Transcontinental	8	40		6	5	1	20
Short Haul	25	56		5	15	-	45
Totals	33	51		11	20	1	65

<u>Grand Totals</u>							
Transcontinental	83	48		42	26	23	174
Short Haul	130	54		19	70	22	241
Totals	213			61	96	45	415
Percentages		51.3%		14.6%	23.1%	11.0%	100%

Asst. Chief Engr.  
St. Paul, Minn.  
September 14, 1936w



GREAT NORTHERN HILLYARD TREATING PLANT UNDER CONTRACT WITH NATIONAL POLE AND TREATING COMPANY CONTRACT DATED JUNE 1, 1936.

- (A) Estimated cost to G. N. for treating fir cross ties, 7x8 - 8', treating in next five-year period slightly less than 1,750,000 cubic feet per year. Rental \$35,000 per year.

	<u>M.FHM</u>	<u>Per Tie</u>
1. Treating fir ties 7x8 - 8'	\$8.96	\$.3319
2. Rental received, \$35,000.	1.66	.0622
Net Cost	\$7.30	\$.2697

Indirect Items:

1. Taxes on plant	\$.0120
2. Insurance on plant	.0010
3. State Industrial Tax and Workmen's Compensation	.0017
4. Federal Security Tax	.0011
5. Business and Occupational Tax	.0008
6. Total Tax	\$.0166
7. Total Cost to G. N. (2) plus (5)	\$.2863
8. N. P. Cost, Seattle (new contract)	.2331
9. Difference	\$.0532
10. Increase	22.8%
11. G. N. Total Investment \$500,000, Interest at 5%, Average \$12,625	\$.0243
12. Grand Total Cost to G. N. (7) plus (11)	.3105
13. G. N. Total Investment \$500,000, Depreciation at 3% = \$15,000 =	.0264
14. Total cost incl. Interest & Depreciation(12)plus (13)	.3369

(B) Apparent Profit to Contractor:

1. Received from G.N. at \$8.96 M.FHM, 7x8-8' per tie	\$.3319
2. Rental payment to G. N.	.0622
Gross Return	\$.2697
1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, adzing, and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - steam and power	.02000
7. Plant Labor, operation and repairs	.02100
8. Material and supplies	.01500
9. Maintenance of yard tracks, 6 miles, \$3500.	.00311
10. Interest and depreciation on cranes and locomotive, \$60,000 x 10% = \$6,000.	.01639
11. General and plant supervision - \$22,000	.03888
12. Total Cost to Contractor	.14588
13. Gross Return	.26970
Apparent Net Profit	.12382
Net Profit	84.87%

SUMMARY - (Restated):

	<u>M.FEM</u>	<u>Per Tie</u>
1. G. N. Payment to contractor	\$8.96	\$.3319
2. G. N. Indirect item costs (taxes etc)	.44	.0166
3. G. N. investment \$500,000, Interest at 5% = \$12,625.	.65	.0243
4. G. N. Investment \$500,000, Depreciation at 3% = \$15,000	.70	.0264
5. Total Gross Costs	10.75	.3992
6. Rental Received from Contractor, \$35000.	1.66	.0622
7. Net Cost	9.09	.3370
8. N. P. Costs Seattle (new contract)	6.25	.2331
Difference	2.84	.1039
Increase		44.56%
1. Estimated direct costs to contractor	\$2.427	\$.09061
2. Interest and depreciation, equipment etc. \$60,000 x 10% = \$6,000	.439	.01639
3. General and plant supervision, \$22,000.	1.042	.03888
4. Sub Total	3.908	.14588
5. Rental payment to G. N., \$35,000.	1.667	.06222
6. Total	\$5.575	\$.20810
7. Receives from G. N.	8.891	.33190
Apparent Net Profit	\$3.316	\$.1238
Net Profit		59.48%

Asst. Chief Engineer  
St. Paul, Minnesota  
September 17, 1936w



Statement #14

COST OF CROSS TIES TREATED FOR THE SP&S AT ST. HELENS AND HILLYARD DURING 1932 AND 1936. SPECIFICATIONS REQUIRE BORING, INCISING AND ADZING. MIXTURE TREATMENT 50/50, SIX LBS. PER CUBIC FOOT.

			<u>Treatment Cost</u>	
			<u>Per M.FEM</u>	<u>Per Tie</u>
1. Hillyard 1932 -	37,725 ties			
	1,443,563 FEM	\$13,713.85	\$9.50	\$.3635
	Preservatives	8,964.53	6.21	.2376
	Total Cost	22,678.38	15.71	.6011
2. Hillyard 1936 -	28,214 ties			
	1,184,988 FEM	\$10,072.40	\$8.50	\$.3570
	Preservatives	6,837.38	5.77	.2423
	Total Cost	16,909.78	14.27	.5993
3. St. Helens 1936.	19,947 ties			
	775,529 FEM	\$ 6,615.26	\$8.53	\$.3317
	Preservatives	4,474.80	5.77	.2243
	Total cost	11,090.06	14.30	.5560

Note - Data furnished by A. J. Witchel, Sept. 14, 1936.

Asst. Chief Engineer  
St. Paul, Minnesota  
September 17, 1936w

Revised, St. Paul, Minn.,  
Sept. 21, 1936w

TENTATIVE DRAFT OF CONTRACT

1  
CONTRACT made this \_\_\_\_\_ day of \_\_\_\_\_, A. D. 1936, between the Northern Pacific Railway Company, a Wisconsin corporation hereinafter called the "Railway Company," and the West Coast Wood Preserving Company, a Washington corporation hereinafter called the "Creosoting Company."

In consideration of the mutual dependent promises stated in this contract the parties agree:

I. The Creosoting Company shall store for seasoning and treat at its plant located in the city of Seattle, Washington, such forest products as may be offered by the Railway Company from time to time in accordance with specifications in Exhibit "A" attached and made part of this contract. The term "forest products" used herein is inclusive of cross ties, bridge ties and switch ties, timber, lumber, piling, and poles. It is understood and agreed that: (a) The Railway Company reserves the right to treat any portion or all of the forest products used by it in the territory tributary to the Creosoting Company's Seattle plant, in any one or more of the Railway Company's presently owned and individually operated treating plants. (b) The Railway Company shall offer to the Creosoting Company for treatment under the terms of this contract all forest products not reserved under the provisions of the foregoing paragraph (a).

II. The Creosoting Company agrees that its plant shall be maintained during the term of this agreement in such degree of working efficiency that the capacity of the plant shall be adequate at all times to treat the yearly requirements of the Railway Company.

III. The Railway Company will notify the Creosoting Company in writing prior to the first of October of each year of the approximate number of cross ties and other forest products which it desired to have stored for seasoning and subsequent treatment during the following calendar year.

IV. The Railway Company will furnish open cars, in so far as may be possible, for delivery of untreated material and for shipment of treated material. The Railway Company at its own cost and expense will do all required switching of its cars of forest products billed to and from the plant. The Creosoting Company agrees to make requests for only such switching as is reasonably necessary and such switching shall be done so far as is practicable at times most convenient to the Railway Company between the hours of 7:00 A.M. and 6:00 P.M.



V. The forest products to be furnished hereunder shall be delivered on cars at the plant of the Creosoting Company. The Creosoting Company shall promptly unload cars and stack the material in the storage yard of the plant for seasoning. The Railway Company in making deliveries to the Creosoting Company shall have regard to its capacity for receiving and stacking material. The Creosoting Company shall pay the Railway Company compensation for any delays in unloading said cars in accordance with the rates set up in the Railway Company's published demurrage tariffs whenever eight (8) or less cars are delivered per day. Whenever more than eight (8) cars per day shall be delivered the expense incident to the detention of cars for unloading shall be assumed by the Railway Company. The Creosoting Company will accept delivery of forest products on scows or in rafts alongside its plant under the same conditions as outlined for delivery on cars, except that the Creosoting Company will not be required to pay the Railway Company for delays in unloading such scows or rafts.

VI. All cross ties will be properly segregated by grades on cars by the Railway Company to facilitate stacking for seasoning and subsequent treatment by grades. Switch ties, timber and piling delivered shall be sorted by the Creosoting Company, at its own expense, for its convenience in handling for treatment.

VII. All treated material shall be ~~un~~loaded and billed as directed by the Railway Company. Cross ties will be loaded by grades and rail borings. Switch ties will be loaded by lengths.

The Railway Company shall furnish promptly all cars required to ship out treated material. The Creosoting Company agrees to give the Railway Company at least five days' notice as to the time such cars are required.

VIII. The Creosoting Company shall provide fire protection for seasoning and storage yard satisfactory to the Railway Company.

The forest products shall remain the property of the Railway Company and be insured by it against loss by fire.

IX. The Creosoting Company agrees to count and tally material received in each car as soon as possible after receipt of car at its plant, either before or immediately after unloading, against invoice or inspection reports furnished by the Railway Company and to mail reports of such tally to the Railway Company representative immediately after each invoice or inspection report has been tallied.

The Creosoting Company agrees that, as far as practicable, it shall have

Painted on each stack the initial, number, and out turn of each car from which material is unloaded, and the date of unloading.

The Creosoting Company agrees to return to the Railway Company the identical material shipped to it by the Railway Company after said material has been treated, and in case there should be any shortage whatever, the Creosoting Company agrees to pay the Railway Company therefor at the market price at Seattle, Washington, of like material at the time the shortage is discovered; provided, however, that the Creosoting Company shall not be responsible for shortage resulting from fire or causes which are clearly beyond its control. Joint inventories of all forest products shall be taken at least every six months, and discrepancies found adjusted at that time.

The Creosoting Company agrees to furnish reports of all material delivered, shipped, used and on hand at regularly stated intervals as may be required by the Store Department or the Insurance Department of the Railway Company.

X. The Railway Company will furnish all creosote and petroleum oil required to treat its material under this agreement. The Creosoting Company agrees to unload and store all creosote and petroleum oil furnished by the Railway Company in railroad tank cars at the plant. The Creosoting Company agrees to set aside a storage with a capacity of 300,000 gallons for creosote furnished by the Railway Company. Creosote furnished by the Railway Company from vessels or barges shall be delivered into the storage tank without expense to the Creosoting Company. Should the Railway Company elect to permit the Creosoting Company to purchase creosote and oil for it, the prices to be paid and the quantities to be purchased for its account must be approved by the Railway Company and the material must conform to the current specifications of the Railway Company to be kept on file with the Creosoting Company. The Railway Company shall carry the insurance and pay the taxes on creosote and oil stored for it by the Creosoting Company, and agrees to pay promptly all invoices covering creosote and oil purchased with its authority for its account.

XI. The Creosoting Company agrees to provide storage tanks of suitable capacity to store the preservatives required for treating the material of the Railway Company, together with working tanks and proper gauges to insure accurate and satisfactory measurements of creosote and oil used in the treatment of the different classes of material for the Railway Company.

The Creosoting Company may, with the written consent of the Railway Company first had and obtained, use the preservatives belonging to the Railway Company for the purpose of treating forest products for other concerns in the same plant, and



the Creosoting Company shall thereupon promptly replace preservatives so used with other preservatives meeting the specifications of the Railway Company and shall permit no delays in the treatment of Railway Company material to result from such use. In case the Creosoting Company shall be permitted such use of Railway Company preservatives, then joint inventories of preservatives shall be made at the end of each month or at any other appropriate time for the purpose of adjusting surplus or deficits. Any surplus or deficit must be pro-rated on the relative final retention of preservatives for the different classes of material treated for the parties concerned.

XII. The Railway Company desires to have its cross ties treated during the period from August 1st to December 31st of each year. The Creosoting Company agrees to use reasonable efforts with due regard to the business offered by other customers and the treating capacity of its plant to treat the yearly requirements in this interval if sufficiently properly seasoned ties are available. If for any reason the Creosoting Company at any time cannot with reasonable effort carry out the aforementioned preferential arrangement, the Railway Company agrees to have delivered green ties in advance of requirements so that sufficient seasoned ties will be available for treatment at approximately uniform monthly rates for the yearly requirements.

XIII. The Creosoting Company agrees to store treated ties in its storage yard up to the convenient capacity for temporary storage at the request of the Railway Company. The storage and extra handling involved in loading into cars shall be compensated for at a price scheduled in this agreement.

XIV. The Creosoting Company agrees that upon the written request of the Railway Company to do so, it will accept any modification, changes or substitutions in the specifications in Exhibit "A" hereinbefore mentioned, provided such modifications, changes or substitutions will not require the purchase of any additional equipment, or increase the cost to the Creosoting Company or lessen the plant capacity.

The Railway Company agrees that in the event a change of process is made, at its request, it will pay the Creosoting Company any royalty the Creosoting Company may be required to pay in consequence thereof, and will also protect the Creosoting Company against all claims pertaining thereto.

XV. The Railway Company, through its designated representatives or agents, shall have access at all reasonable times to the plant and premises of the Creosoting Company and the right to inspect all operations therein, and shall be furnished all necessary and proper facilities for testing the preservatives employed and the amount absorbed by each charge of ties and other material treated for the Railway Company.

The Creosoting Company shall furnish records on forms furnished by the Railway Company of all treating operations to correspond to that which the Railway Company keeps at its own treating plants.

XVI. In case of any dispute or difference arising as to the interpretation of any sections herebefore set out, the said dispute and causes of differences shall be referred to arbitration and determination of a single arbitrator, if the parties hereto agree upon one; otherwise to three arbitrators - one to be appointed by each of the parties hereto and the third arbitrator to be nominated and appointed by the first named arbitrators. Should the first named arbitrators fail to agree upon the third arbitrator, then such selection shall be left to a Judge of the United States District Court for the District of the State of Washington. The decision of the single arbitrator or a majority of the three arbitrators shall be final and binding upon the parties. Pending the award of arbitration, there shall be no interruption in the transaction of business pursuant to this agreement and statements and payments in respect thereto shall be made in the same manner as prior to arising of such differences.

Each party shall pay for services of and all personal expenses incurred by arbitrator chosen by or for it and both parties shall jointly and equally pay for the services and expenses of the single or third arbitrator, together with all other and different expenses of the arbitration.

XVII. If at any time during the term of this agreement the operation of the Creosoting Company's plant shall be temporarily suspended because of fire, explosion, strikes or other causes not within its control, the time during which the operation of this plant shall be suspended shall not be counted as a part of the term of this agreement, and a corresponding additional time shall be given it for performing its obligations under this agreement; provided, however, in case of the total or partial destruction of the said plant by fire or other cause the Creosoting Company shall promptly repair, rebuild and restore the same to substantially the same condition in which it was before such total or partial destruction and pending such reconstruction the Railway Company may remove its ties and other material from the seasoning yard, untreated or for use/if desired for treatment at ~~the~~ its own or some other commercial plant.

XVIII. The Railway Company agrees to pay to the Creosoting Company for work performed and services rendered, as specified in this agreement, the following prices:



- A-1 For the treatment of all seasoned cross ties, per thousand feet board measure \$6.25
- A-2 For treatment of unseasoned cross ties taken direct from incoming railroad cars, per thousand feet board measure \$6.25
- A-3 For treatment of unseasoned cross ties taken from stock piles in seasoning yard, per thousand feet board measure \$6.70
- B-1 For the treatment of all seasoned switch ties, per thousand feet board measure \$8.00
- B-2 For the treatment of unseasoned switch ties taken direct from incoming railroad cars, per thousand feet board measure \$8.00
- B-3 For the treatment of unseasoned switch ties taken from stock piles in seasoning yard, per thousand feet board measure \$8.60
- B-4 For the treatment of bridge ties in cylinder capacity lots the conditions and prices of B-1, B-2 and B-3 shall apply. For the treatment of bridge ties in less than cylinder capacity lots the conditions and prices of C-1, C-2, and C-3 shall apply.
- C-1 For the treatment of all sawed material other than cross ties and switch ties in cylinder charges of 30,000 feet board measure or less (the treating company being given the option of treating such charges separately or mixed with commercial material) per thousand feet board measure \$12.80
- C-2 For the treatment of all sawed material other than cross ties and switch ties in cylinder charges in excess of 30,000 feet board measure which require a time duration of not longer than twelve (12) actual treating hours, per thousand feet board measure \$10.20
- C-3 For the time in excess of twelve (12) actual treating hours required for treating material covered by paragraph C-2, per cylinder per hour or fraction thereof \$5.10
- D-1 For the treatment of all piling, poles and other similar material which requires a time duration not longer than twelve (12) actual treating hours, the Creosoting Company being given the option of treating quantities of less than a full cylinder charge either separately or combined with commercial material, per cubic foot \$0.14
- D-2 For time in excess of twelve (12) actual treating hours required for treating material covered by paragraph D-1, with the understanding that where material is treated in the same charge with commercial material the time over twelve (12) actual hours will be pro-rated between the Railway and commercial material in the proportion that the volume of the material of each bears to the total volume in the charge, per cylinder per hour or fraction thereof.. \$5.10
- D-3 The prices quoted in paragraphs D-1 and D-2 are predicated on the Railway Company having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment the Railway Company shall have the option of purchasing untreated piles at mutually agreeable prices from the stock of the Creosoting Company, or purchasing treated piles which meet the Railway Company's requirements from the Creosoting Company at its current commercial price.
- E-1 In cases where it is found, on account of unseasoned conditions of material, or other conditions not the responsibility of the Creosoting Company, an unsatisfactory treatment has been obtained and the Railway Company inspector considers it advisable to segregate and re-treat all or any portion of cylinder charge of piles, it shall be done at the following rate for each re-treatment in addition to the prices mentioned in paragraphs D-1 and D-2:  
 (a) Two cents (\$.02) per cubic foot for piling, poles and other similar material retreated. It is understood that entire cylinder charges returned for continuation of treatment without segregation of any part of the material shall not be considered as coming under the provisions of this E-1.

- E-2 For storage of treated cross ties after treatment and subsequent loading on cars, in addition to prices A-1, A-2, A-3, per thousand feet \$0.01
- E-3 For storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with the Railway Company's instructions for shipment, in addition to prices B-1, B-2, and B-3, per thousand feet board measure \$0.60
- E-4 For incising sawed material other than cross ties and switch ties including all handling not included under paragraph C-1, C-2, C-3, necessary to accomplish it, per thousand feet board measure \$0.50
- E-5 For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus ten (10) per cent to cover supervision and profit.

XIX. It is understood and agreed that the prices quoted under Section XVIII, paragraphs A-1, A-2, A-3 and B-1, B-2, B-3, cover the unloading from railroad cars or barges, handling to the seasoning yard or to treating trams before treatment, moving them to boring, adzing and incising plant, boring, adzing and incising cross ties and incising switch ties; moving to cylinders, treating them and loading them from trams to railroad cars; and further that prices quoted under paragraphs C-1, C-2, C-3 and D-1, D-2, D-3, cover unloading material from railroad cars or barges and rafts, handling to seasoning yard or to trams, moving to treating cylinders, treating loading from trams on to railroad cars. The prices in Paragraphs A-B-C-D apply to treatment of both air-seasoned and artificially seasoned material.

The "actual treating hours" is considered to be the actual normal time occupied while the ties or other materials are in the cylinders in the process of treatment as shown by the treating records. Delays caused by failure of the Creosoting Company's equipment, low steam pressure, etc., shall be deducted when computing overtime charges.

Where material of the Railway Company is treated in the same charge with commercial material as provided for in Section XVIII, paragraphs C-1 and D-1, the Railway Company's stock of preservatives shall be charged with the calculated quantity required to treat its portion of the mixed load.

XX. The Creosoting Company agrees that, in case it, during the period of this agreement, makes contracts with other railroads directly or through their agents, for the treatment of forest products at prices lower than those scheduled in this agreement, then such lower prices shall become immediately effective in this contract.

XXI. The Railway Company will, on or before the thirtieth day of each month, pay to the Creosoting Company all sums owing to it at the end of the next preceding calendar month, upon proper bills, certified by the Railway Company representative, rendered promptly by the Creosoting Company to the Railway Company.

XXII. This agreement shall be effective as of January 1st, 1937 and shall remain in force for a period of five years, and continue thereafter until cancelled by either party giving one year's written notice to the other party. The effective date of cancellation shall be as of December 31st following the year's notice. The earliest date of the year's notice of cancellation shall be January 1st 1941. It is understood and agreed, however, that any forest products on hand for treatment at the termination of this contract shall be carried to treatment completion under the provisions of this agreement.

XXIII. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal is hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY  
By \_\_\_\_\_

WEST COAST WOOD PRESERVING COMPANY  
By \_\_\_\_\_



EXHIBIT "A" ATTACHED AND A PART OF CONTRACT DATED \_\_\_\_\_ BETWEEN THE  
NORTHERN PACIFIC RAILWAY COMPANY AND THE WEST COAST WOOD PRESERVING COMPANY.

Specifications covering the seasoning and treatment of cross and switch ties, timber, lumber and piling.

#### Seasoning

1. Green ties, timber, lumber and piling will be delivered by the Railway Co. at the plant of the Creosoting Co. The Creosoting Co. will unload all material and pile same for storage and seasoning, using a spacing which local experience indicates is the most favorable for efficient seasoning. Material shall be stored on non-decaying sills and the ground must be kept free of weeds and vegetation or fungus growths which would be injurious to the timber.

2. Material shall be permitted to remain in the seasoning yard until the Railway Company representative considers it suitable for treatment. It is the intention to season material to a point where it can be successfully treated, without artificial seasoning, to obtain the desired penetration.

3. The Creosoting Co. shall save all car stakes, separators, etc., received with incoming material and make use of same for separators in seasoning, staking outgoing loads, etc.

#### Boring, Adzing and Incising

4. Before treatment all cross ties shall be bored for spikes, adzed for seating tie plates and incised by Greenlee Brothers or other approved machine. The incisions are to be not less than three quarters (3/4) of an inch in depth and so spaced as to permit a uniform distribution of the preservative to the depth of the incisions. The Railway Co. shall furnish plans showing the boring spacing required for the different sections and also the dimensions of adzing areas.

5. Incising of switch ties, timber and lumber will be optional with the Railway Company.

#### Preservatives

6. The preservative for cross and switch ties shall be a 50-50 mixture of creosote and petroleum oil. The creosote shall conform to the American Railway Engineering Association specifications for Grade I Creosote Oil and be thoroughly mixed before using with California Crude Oil with an asphaltic base. For timber, lumber and piling the preservative shall be straight American Railway Engineering Association Grade I Creosote. The Railway Company may from time to time change the proportions of the mixture treatment or the specifications for Creosote and Oil.

#### Moisture Content

7. All material to be treated in any one charge must have approximately the same moisture content.

#### Material Sizes and Stripping

8. Material four inches or less in thickness must be treated separately from timbers of a greater thickness. Sufficient strips must be placed between tiers in any case where, in the judgment of the Inspector, stripping is necessary to afford free circulation of preservatives around each piece.

#### Artificial Seasoning

9. When material has not been air seasoned, it may be artificially seasoned, at the option of the Railway Co., in the treating cylinders by boiling under vacuum at temperatures ranging from 180° F. to a maximum of 200° F. as follows:

10. After the material is placed in the treating cylinder, preservative heated to about 160° F. shall be admitted until the material is completely immersed. A vacuum shall then be created and gradually raised until a minimum of 20 inches is

reached and this vacuum is to be maintained until the condensation passing off from the timber and accumulated in the hot well of the condenser does not exceed one-tenth of a pound per cubic foot of timber in charge per hour.

11. After the completion of the seasoning period, or bath, Paragraph 12, upon breaking the vacuum the preservative shall be immediately drained completely from the treating cylinder. This draining need not be done in case the water content of the preservative in the cylinder is not objectionable in the opinion of the inspector.

#### Preparatory Bath for Air Seasoned Material

12. All thoroughly air seasoned material must be held in a hot oil bath for a period of 2 to 8 hours at a temperature of about 180° F. in order to obtain the necessary absorption without the use of excessive pressure for a long period of time.

#### Treatment

13. Empty Cell Process without initial air pressure shall be used.

#### Injection of Preservative Under Pressure

14. Following the heating or the artificial seasoning period, the cylinder shall be filled with Preservative and pressure applied as required to a maximum of 160 pounds per square inch and maintained until the specified penetration or final absorption of preservative has been obtained. The maximum pressure in the case of cross and switch ties shall be 150 pounds per square inch. The temperature of the preservative during the pressure period shall be as high as possible, with a minimum limit of 160° F. and a maximum of 200° F.

15. After pressure is completed the cylinders shall be emptied of preservatives and a vacuum of at least 25 inches of mercury promptly created and maintained for a sufficient period of time to free the material of dripping preservative.

#### Penetration Cross and Switch Ties and Piling

16. The minimum penetration of preservative shall be 3/4 of an inch. Representative ties from each charge must be tested for penetration, and at least 75% of the ties so tested must show the above specified minimum. In determining penetration, light discoloration of the wood from treatment shall not be considered.

The minimum penetration on every pile shall be not less than one inch of black oil.

#### Penetration Timber and Lumber

17. The average depths of penetration for the specified amount of preservative shall be as follows:

Size	12#	14#	16#
3"x12" & 4"x12"	--	--	.50 inch
6"x12"	.50 inch	.55 inch	.65 inch
12"x12" & larger	.75 inch	.85 inch	1.00 inch

The penetration must be based on black oil. Representative pieces from each charge must be tested for penetration and at least 75% of these pieces so tested must show the above specified minimum.

#### Penetration and Final Retention - General

18. The penetration rather than the final retention of preservative shall govern as to the acceptance of treatment. The preservative finally retained by cross and switch ties shall be as nearly as possible 7 pounds per cubic foot of timber. For piles the retention shall be similarly 16 pounds per cubic foot of timber. For timber and lumber this penetration is likewise outlined in paragraph 17. The treating plant shall be provided with the necessary gauges, measuring devices and appliances required to observe and record the gross and final retention of preservative in order that the Railway Company may be assured of obtaining the minimum



specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

#### Retreatment

20. If the penetration or the final retention of preservative should be found unsatisfactory, retreatment or continuation of treatment may be required. In case the unsatisfactory condition is due to the fault of the Creosoting Company's equipment or methods, the extra cost of treatment shall be at the expense of the Creosoting Co. In case segregated material or the entire charge is returned to the cylinder for additional treatment, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

#### Damaged Material

21. Material damaged through improper treatment or handling by the Creosoting Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

#### General Conditions

22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

23. All holes bored for test purposes must be plugged with creosoted plugs furnished by the Creosoting Co.

24. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

25. The Creosoting Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.

Saint Paul, Minn.,  
September 25, 1936w

1  
MR. BERNARD BLUM:

I devoted considerable time with Messrs. Loom and Hopkins accumulating and compiling data for a complete review of the situation relating to contract treatment of ties for the Coast territory at Seattle. For convenient reference in connection with the discussion that follows these data are shown in Statements #1 to #14 inclusive, next attached.

We spent several days early this month discussing this subject with Mr. H. E. Horrocks, Manager, and Mr. A. D. Barrall, secretary-treasurer, of the West Coast Wood Preserving Company, which took over the original contract of November 4, 1926 with the J. M. Colman Company. The present contract which expires Dec. 31, of this year, and subsequently modified in 1932 was made after a thorough-going investigation of all the economic possibilities of contract treatment on the Coast, starting originally with an investigation of the economics of constructing our own plant at either Tacoma or Seattle. That investigation also covered the prospects of combining the treatment of railroad forest products in either a jointly-owned railroad plant or some existing or projected commercial plant. The evidence of that former investigation has been reviewed in the present instance.

The contract has been, in all respects, advantageous to the creosoting company. In Statement #6 we have attempted from our own experience and the observations at the contractor's plant to set up the costs to the contractor. The contractor made an investment of about \$300,000 in expansion in the way of seasoning yard and increased treating facilities to take on the railroad contract. We have, in this set-up, arbitrarily charged six percent on the depreciated principal, and amortized completely the plant in the ten year period of the contract. This shows that on this basis the contractor made a profit of four percent on his total operations under this contract and provided himself with a plant free of future ownership obligations to carry on future operations on a more favorable basis. It is true, of course, that as a practical business matter the contractor cannot for purposes of taxation depreciate his plant in this fashion, so that whatever adjustments are made in the depreciation and interest rates reflect a corresponding increase in operating profit. It is clear to us that by whatever line of reasoning this matter may be presented, the contractor's profit on these operations is considerably less than prevails in any of the commercial plants in that territory.

The prices which we could expect to obtain for a renewal of this contract are dictated by the competitive situation. Ten years ago the competition for comparative purposes was our own plant at Paradise, and that situation prevails today even in a more pronounced degree because of the fact that the volume of business which we have to offer in the future is considerably less and there is now no prospect of working out any combination of railroad business for a jointly owned plant. I have discussed the entire competitive situation in some considerable detail in the next attached memorandum. The contractor is anxious to maintain these contract relations in the future for such volume as we may have to offer and he is not



Sept. 25, 1936.

requiring any guarantees of minimum volume as was necessary for obvious reasons in the present contract. The contractor's labor costs at present are higher than they were in 1929 by reason of certain labor schedule regulations, and there has since been introduced a number of State and Federal taxes which increased his costs. The contractor owns two plants; the one at Eagle Harbor having six cylinders, was designed originally for treatment of piling and timber. About ten years ago they took on treatment of ties and timber for the Milwaukee Road. The Milwaukee Road barges the ties between Seattle and Eagle Harbor. These ties are all delivered green and are seasoned in the cylinders. The Seattle plant is devoted to the Northern Pacific contract, and the treatment of material in transit for movement by rail to the east, as well as a considerable volume of business delivered locally by truck. The contractor has treated considerable more ties and lumber for the Milwaukee than has been handled under the Northern Pacific contract. This business will continue in the future. The contractor, therefore, is not in a position to make any material reductions in the rates to the N. P. without likewise reducing prices to the Milwaukee.

The contractor has developed an excellent yard and handling facilities for storing and seasoning of ties. If the N. P. contract is not continued this facility would be well adapted to handling forest products for treatment and shipment to the Orient, or coastwise movement. A large increase in this character of business has been anticipated but may not materialize for a long time to come.

The present contract has been advantageous to the N. P. because of the ideal seasoning conditions that exist in this location and the economic cost comparisons as to treating at our own plant at Paradise. The contract has been advantageous from the standpoint of our being able to have ties treated from seasoning stock at any time on short notice, a situation which we cannot meet to the same degree in our own plant.

I am attaching hereto tentative draft of contract prepared to definitely outline the contractor's proposal and represents no commitment by either party until properly executed. The contract requires no obligation with respect to minimum amounts of material to be treated. We can offer any amount we choose except that we would be obligated to offer the contractor any material used in the territory tributary to this plant not reserved for treatment in any of our own plants.

The schedule of prices makes a reduction of 25¢ per MFBM in the treatment of cross ties and lumber other than cross ties and switch ties. The \$6.25 price likewise applies to the treatment of gross cross ties and switch ties handled direct from the cars through the plant and back on to the cars for loading out. The extra cost for cylinder time for treating cross ties and switch ties beyond the first 12-hour period has been eliminated. If we should elect to treat partially seasoned cross ties and switch ties taken from seasoning stock the cost will be \$6.25 per MFBM plus compensation to the contractor for having unloaded and stacked these ties for seasoning. This amounts to 45¢ per MFBM for cross ties and 60¢ per MFBM for switch ties.

Sept. 25, 1936.

By far the largest portion of the contract deals with cross ties and switch ties. Statement #8 shows that from the standpoint of volume these two items constitute 93.8 percent of the total. Statement #11 shows that from the standpoint of cost, cross ties and switch ties account for 88 percent of the total for the period from the beginning of the contract up to August 1, 1936.

On Statement #10 I have attempted to estimate roughly the probable treatment requirements in the territory tributary to this plant for the next ten year period. This has been worked up from the best data available as to the number of untreated ties still in track in that territory after the current year, and the estimated renewal of treated ties in track, and approximate estimate of switch tie, piling and timber likely to be treated. This shows an average of approximately 200,000 ties per year. The decrease in prices under the new schedules applied to the quantities of Statement #10 show a reduction of about \$30,000. The reduction based on cross ties and switch ties only is 5.5%. The reduction based on the total material covered by Statement #10 is 4.6%.

The price schedule on treatment of piling has not been changed. The schedule is reasonable for the treatment of seasoned piling. Our piling requirements have been so uncertain that we have not been able to carry a stock of seasoning piling in anticipation of the requirements, so that we have gradually worked around to purchasing treated piling from the contractor. I can see no justification from the present indications for our attempting to carry a seasoning stock of piling in view of the arrangements which are outlined in the proposal. The treating of piling is a large proportion of the contractor's business and they generally have invested about \$200,000 in seasoning piling stock to meet current orders. The prices which they charge commercially are based on a compromise between the cost of treating green and seasoned piling. The proposal is based on our purchasing from the contractor treated piling at the current commercial prices which are fixed by the competition in that locality. These prices are subject to check from time to time from the contractor's records and we are therefore in a position to obtain the prices dictated by the local competition from time to time and that is the most advantageous position we could hope to obtain under any circumstances and we still have the privilege of availing ourselves at any time to such economic advantages as may accrue from maintaining our own supply of green or seasoned piling.

The contractor uses foreign creosote delivered by boat to his large storage tanks and it has been our practice to purchase from the contractor such creosote as we may require for the treatment of our material. This has worked out to our advantage because the foreign creosote has been of a better quality than the domestic supply and at a lower cost. There has also been the incidental advantage to us because under this arrangement the contractor assumes all the loss from evaporation and the gradual accumulation of sludge. The contractor uses foreign creosote by reason of its lower cost and the fact that the foreign oil, containing lower percentage of heavy residue, makes for cleaner treated material which is an essential in the competitive commercial treatment market.



Sept. 25, 1936.

The contractor is not agreeable to mixing domestic creosote which we may furnish in his storage tanks. The proposal, however, does provide that the contractor will set aside a 300,000-gallon storage tank for our use in case we should decide to provide domestic creosote delivered either by rail or by vessel. In view of this, the creosote situation has no bearing on the acceptance or rejection of this proposal, and we can use domestic creosote if for any reason that should be desirable. The comparative creosote costs are shown in Statement #7.

The Milwaukee, whose ties are treated by this same company at Eagle Harbor plant, likewise furnish the preservative and they have under the same arrangements as prevail with us purchased their creosote from the treating company. The Milwaukee have been approached to use domestic creosote instead of foreign oil, and after an investigation of all phases of the subject they declined to change their practice. The Southern Pacific likewise use foreign oil, delivered by vessel on the Pacific Coast and shipped to their plant inland by rail. The Santa Fe, years ago, used foreign oil but in recent years they have purchased domestic creosote delivered by vessel at National City and Galveston and shipped to their inland plants by rail. The Santa Fe creosote specifications however require a creosote with a considerably less residue than we have heretofore used.

The costs of treatment at Paradise, in a more pronounced manner than existed ten years ago, dictate the plane of comparison for contract treatment at Seattle. Statement 1- A shows the cost of treatment, the cost of ties and incidental cost for ties treated under the proposed contract. Statement #2 shows similarly cost of Inland Empire ties treated at Paradise and shipped to the Coast. These two statements, of course, take into consideration the difference in the untreated tie costs. At present there is a differential of \$1 per MFM. These two costs are essentially the same. These comparisons use the normal figures of out-of-pocket transportation costs for hauling company material. It is not necessary here to discuss the reasons for the assumptions made in determining out-of-pocket costs. There is always an unknown element dealing with the fluctuating car supply situation which is important in long hauls. I should call attention to the somewhat indefinite assumptions which it has been necessary to make on the extra cost of hauling ties through the joint account territory south of Seattle, utilized in the set-ups for the St. Helens plant, in the next attached memorandum. Statement #3 shows the probable cost on the same basis of using Coast Douglas Fir ties, shipping them to Paradise for treatment and returning them to the Coast. This is 6.53¢ in excess of the proposed contract cost and would amount to about \$13,000 per year in increased cost. This would obviously be somewhat abnormal method of handling ties by reason of the long eastbound haul and might be particularly troublesome in periods of car shortage.

The contractor is agreeable to contract on a year-to-year basis. He is not willing to accept a ten year contract, by reason of the upward trend of commodity and labor costs. The contractor, however, will agree to a contract for a five year period. In view of all the circumstances I consider the proposal as very satisfactory and advantageous and therefore recommend its acceptance on the basis of a five year period.

L. YAGER.

ESTIMATED COST OF TREATED TIE TREATED UNDER CONTRACT AT SEATTLE  
AND DELIVERED TO THE DIVISIONS. BASED ON 300,000 TIES PER YEAR  
(EQUIVALENT 7" x 8" - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green tie 37-1/3 FHM at \$12	\$4.480
2. Sales tax at 2% on 75%	.0067
3. Cost of contract treatment	.2600
4. Cost of creosote 1.35 gallons at \$.1326	.1790
5. Cost of petroleum 1.65 gallons at \$.021	.0347
6. Treating supervision, \$2400	.0080
Sub Total	\$9.9364

(B) INTEREST AND TAXES:

1. Interest on preservatives \$56,650 at 6% for 6 months \$1579.50	\$0.0054
2. Taxes on preservatives \$26,325 at 32% x .0355	.0010
3. Taxes on seasoning ties \$.4547 at 32% x .0355	.0052
4. Interest on seasoning ties \$.4547 at 6% - 12 months	.0273
	\$0.0389

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 148 miles, 125 lbs. at \$.003	\$0.0273
2. Haul treated tie average haul 100 miles, 130 lbs. at \$.00225	.0146
Sub Total	\$0.0424

SUMMARY:

A. Direct Costs	\$9.9364
B. Interest and Taxes	.0389
C. Indirect items, Freight, etc.	.0424
Totals	\$1.0177

Seattle, Wash.  
August 30, 1936w



Statement 1-A

ESTIMATED COST OF TREATED TIES UNDER PROPOSED NEW CONTRACT AT SEATTLE AND DELIVERED TO THE DIVISIONS. NO MAXIMUM AMOUNTS SPECIFIED IN PROPOSED CONTRACT. (EQUIVALENT 7x8 - 8').

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green tie, Douglas fir, 37-1/2 FEM x \$12.	\$.4480
2. Sales tax at 2% on 75%	.0067
3. Cost of contract treatment, at \$6.25 M.FEM	.2331
4. Cost of creosote, 1.35 gal. x \$.1326	.1790
5. Cost of petroleum, 1.65 gal. x \$.021	.0347
6. Treating supervision, \$2400.	.0080
Sub Total	\$.9095

(B) INTEREST AND TAXES:

1. Interest on preservatives, \$52650 x 6% for 6 months,	
\$1579.50	\$.0054
2. Taxes on preservatives, \$26325 x 32% x .0355	.0010
3. Taxes on seasoning ties, \$.4547 x 32% x .0355	.0052
4. Interest on seasoning ties, \$.4547 x 6%, 12 months	.0273
Sub Total	\$.0389

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 148 miles,	
125 lbs. x \$.003	\$.0278
2. Haul on treated ties, average haul 100 miles,	
130 lbs. x \$.00225	.0146
Sub Total	\$.0424

SUMMARY:

A. Direct Cost of Ties and Treatment	\$.9095
B. Interest and Taxes	.0389
C. Indirect Items, Freight, Etc.	.0424
Total	\$.9908

Asst. Chief Engineer  
St. Paul, Minnesota  
September 17, 1936w

ESTIMATED COST OF TREATING INLAND EMPIRE TIES AT PARADISE AND SHIPPING  
TO SEATTLE PLANT TERRITORY. BASED ON 300,000 TIES PER YEAR.  
(EQUIVALENT 7x8 - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green ties 37-1/3 FEM at \$13.	\$ .4850
2. Cost of treatment (direct items)	.3531
3. Cost of treatment (indirect tax)	.0037
4. Cost of treatment (indirect overhead etc.)	.0236
Sub Total	\$ .8654
Interest and depreciation on investment (\$.0220)	

(B) INTEREST AND TAXES:

1. Interest on seasoning ties, \$.485 at 6% - 12 months	\$ .0291
2. Taxes on seasoning ties, \$.485 at 1.63%	.0079
Sub Total	\$ .0370

(C) INDIRECT ITEMS, FREIGHT ETC.:

1. Haul on green ties, average haul 146 miles, 125 lbs. at \$.003	\$ .0274
2. Haul on treated ties, average haul 662 miles, 130 lbs. at \$.0015	.0645
Sub Total	\$ .0919

SUMMARY:

A. Direct Cost	\$ .8654
B. Interest and Taxes	.0370
C. Indirect Items, Freight, Etc.	.0919
Total	\$ .9943

At Seattle, Wash.  
August 30, 1936  
Revised St. Paul, Minn.  
September 17, 1936w



Statement #3

ESTIMATED COST OF TREATING COAST FIR TIES AT PARADISE AND SHIPPING  
BACK TO SEATTLE PLANT TERRITORY. BASED ON 300,000 TIES PER YEAR.  
(EQUIVALENT 7x8 - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green ties 37-1/3 FEM at \$12.	\$.4480
2. Sales tax - does not apply	-
3. Cost of treatment (direct items)	.3531
4. Cost of treatment (indirect tax)	.0037
5. Cost of treatment (indirect overhead etc.)	.0236
Sub Total	\$.8284
Interest and depreciation on investment (\$.0220)	

(B) INTEREST AND TAXES:

1. Interest on seasoning ties \$.448 at 6%, 12 months	\$.0269
2. Taxes on seasoning ties \$.448 at 1.63%	.0073
Sub Total	\$.0342

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 688 miles, 125 lbs. at \$.003	\$.1290
2. Haul on treated ties, average haul 662 miles, 130 lbs. at \$.0015	.0645
Sub Total	\$.1935

SUMMARY:

A. Direct costs	\$.8284
B. Interest and taxes	.0342
C. Indirect items, freight, etc.	.1935
Total	\$1.0561

At Seattle, Aug. 30, 1936  
Revised, St. Paul, Minn.,  
September 17, 1936w

Statement #4

ESTIMATED COST OF TREATING TIES, NORMAL PROGRAM, AT PARADISE,  
BASED ON 450,000 TIES PER YEAR. (EQUIVALENT 7x8 - 8')

(A) DIRECTLY ASSIGNABLE ITEMS:

1. Creosote 1.35 gal. at \$.128 plus Co. freight \$.008	\$.1836
2. Petroleum 1.65 gal. at \$.021 plus freight \$.0279	.0460
3. Unloading and cross piling	.0200
4. Loading for transfer to machines	.0140
5. Handling through machines	.0180
6. Loading for shipment	.0120
7. Fuel, coal at \$1.10 per ton, plus Co. frt \$.0015	.0210
8. Plant labor (operation and repairs) \$15172.04	.0337
9. Supervision (local) \$ 3801.90	.0084
10. Supervision (general) \$ 5144.76	.0112
11. Material and supplies	.0049
12. Maintenance of tracks and bldgs., \$ 2500.00	.0055
Sub Total	<u>\$.3683</u>

(B) INDIRECT OVERHEAD ETC.:

1. Interest on investment \$185,534 x 6% (\$11,132.04)	\$.0247
2. Depreciation on plant \$189,354 x 3% (\$ 5,380.62)	.0120
3. Taxes on plant, year 1935 - \$280.73	.0006
4. Insurance on plant, 1935 premium, \$147.57	.0003
5. Interest on preservatives \$90,450 x 6% x 1 mo. (\$452.25)	.0010
6. Taxes on preservatives - included in (3)	-
7. Insurance on preservatives - Included in (4)	-
Sub Total	<u>\$.0386</u>

(C) INDIRECT TAXES:

1. Federal Retirement Act, 3-1/2% x Payroll(\$.1173)	\$.0041
--	---------

SUMMARY:

A. Directly Assignable Items	\$.3683
B. Indirect overhead, etc.	.0386
C. Indirect Taxes	.0041
Total Cost	<u>\$.4110</u>

At Seattle, Wash., Aug. 30, 1936.  
Revised, St. Paul, Minn.  
September 17, 1936w



Statement #5

ESTIMATED COST OF TREATING TIES, NORMAL PROGRAM OF 450,000 TIES  
PLUS 300,000 SEATTLE TIES AT PARADISE, TOTAL 750,000 TIES  
(EQUIVALENT 7x8 - 8')

(A) DIRECTLY ASSIGNABLE ITEMS:

1. Creosote 1.35 gal. x \$0.128 plus Co. Frt. \$.008	\$.1836
2. Petroleum 1.65 gal. x \$.021 plus Frt. \$.0279	.0460
3. Unloading and cross piling	.0200
4. Loading for transfer to machines	.0140
5. Handling through machines	.0180
6. Loading for shipment	.0120
7. Fuel, coal at \$1.10 per ton plus Co. Frt. \$.0015	.0110
8. Plant labor (operation and repair) \$21,110.64	.0281
9. Supervision (local) \$ 3,961.05	.0053
10. Supervision (general) \$ 5,144.76	.0069
11. Material and supplies	.0049
12. Maintenance of tracks and bldgs. \$ 2,500.00	.0033
Sub total	<u>\$.3531</u>

(B) INDIRECT OVERHEAD ETC.:

1. Interest on investment, \$185,534 x 6% (\$11,132.04)	\$.0148
2. Depreciation on plant, \$179,354 x 3% (\$ 5,380.62)	.0072
3. Taxes on plant, year 1935 - \$280.73	.0004
4. Insurance on plant, 1935 premium, \$147.57	.0002
5. Interest on preservatives, \$90,450 x 6%	.0010
6. Taxes on preservatives - included in (3)	-
7. Insurance on preservatives - included in (4)	-
Sub total	<u>\$.0236</u>

(C) INDIRECT TAXES:

1. Federal Retirement Act, 3-1/2% of payroll (\$.1043)	\$.0037
--	---------

SUMMARY:

A. Directly assignable items	\$.3531
B. Indirect overhead, etc.	.0236
C. Indirect Tax	.0037
Total Cost	<u>\$.3804</u>

Seattle, Wash., Aug. 30, 1936  
Revised, St. Paul, Minn.  
September 17, 1936w

Statement #6

ESTIMATED SEGREGATION OF COSTS TO CONTRACTOR ON TREATING MATERIAL AT SEATTLE PLANT, FOR CROSS TIES ONLY. BASED ON AVERAGE OF 300,000 PCS. 7x8 - 8' TIE EQUIVALENTS PER YEAR.

Contract price \$6.50 per M. for 12 hr. treatment is equivalent to \$.243 per tie (7x8 - 8')

Actual price paid contractor for treatment of all cross ties to August 1, 1936 was \$.2600 per tie covering all additional charges for overtime.

(A) DIRECTLY ASSIGNABLE COSTS:

1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyer	.00250
3. Conveyer work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - steam power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and supplies, track and bldg. maintenance	.01590
Sub Total	\$.08840

(B) DIRECTLY ASSIGNABLE TAXES:

1. State Industrial Tax and Workman's Compensation, \$.0215 per hour	\$.0017
2. Federal Social Security Act, 2.1% of Labor	.0011
3. Business and Occupational Tax, 1/4% on Gross Business	.0008
Sub Total	\$.0036

(C) OVERHEAD, ETC.:

1. General and plant supervision	\$.0120
2. Amortization of plant, \$300,000 in ten years.	.1000
3. Interest on investment, \$300,000 x 6%	.0330
4. Taxes on plant	.0120
5. Insurance on plant	.0010
Sub total	\$.1580

SUMMARY:

A. Directly Assignable Costs	\$.0884
B. Directly Assignable Taxes	.0036
C. Overhead, etc.	.1580
Total	\$.2500
Payments received	.2600
Profit	\$.0100
Profit Percent of cost	4%

Seattle, Wash., Aug. 30, 1936.  
Revised St. Paul, Minn.  
September 17, 1936w



COMPARATIVE CREOSOTE AND PETROLEUM PRICES BASED ON QUOTATIONS CURRENT  
FOR YEAR 1936.(A) COSTS DELIVERED AT PARADISE:

1. Lehigh, 20% x \$.11-1/2	\$.0230
2. Domestic, 80% x \$.13-1/8	.1050
3. Average cost per gallon	\$.1280
4. Company freight, St. Paul, at \$.0015 = \$.0088 at 80%	.0070
5. Company freight, Lehigh, at \$.0015 = \$.0051 at 20%	.0010
6. Total cost, average company freight	.0080
7. Total cost, incl. company freight (3) plus (6)	.1360

(B) COST DELIVERED AT SEATTLE:

1. Foreign oil at \$.13	\$.1300
2. Washington sales tax at 2%	.0026
3. Total cost delivered	.1326

(C) PETROLEUM AT PARADISE:

1. Cost of oil at \$.021	\$.0210
2. Company freight 7.87 lbs., 584 miles, at \$.003	.0069
3. Total cost	\$.0279

(D) PURCHASE DOMESTIC CREOSOTE OIL FOR SEATTLE CONTRACT:

1. From sources, Chicago and East	\$.12375
2. Foreign line freight propn. Chicago to Seattle	.01507
3. N.P. haul, St. Paul to Seattle, 1904 miles at \$.0015	.01241
Total cost in N.P. tank cars	\$.15123

Cost of creosote purchased from same sources, hauled in  
sellers' cars and Railway Company paying mileage on cars \$.15819

Note: Item (D) set up from prices furnished by Purchasing Department.

Seattle, Wash., Aug. 30, 1936.  
Revised St. Paul, Minnesota  
September 17, 1936w.

STATEMENT OF MATERIAL TREATED UNDER CONTRACT AT SEATTLE

<u>Year</u>	<u>No. Ties</u>	<u>Ties FEM</u>	<u>Per Cent</u>	<u>Switch Tie</u>		<u>Piling &amp; Timber</u>		<u>TOTAL FEM</u>
				<u>FEM</u>	<u>%</u>	<u>FEM</u>	<u>%</u>	
1927	176,045	6,572,346	73.2	595,602	6.6	1,805,958	20.2	8,973,906
1928	468,231	17,480,622	88.1	1,063,188	5.4	1,303,680	6.5	19,847,490
1929	405,893	15,153,337	89.4	1,262,814	7.4	533,988	3.2	16,950,139
1930	262,784	9,810,602	93.9			637,434	6.1	10,448,036
1931	223,030	8,326,453	83.1	1,240,848	12.4	458,094	4.5	10,025,395
1932	244,255	9,118,853	88.7	719,964	7.0	438,816	4.3	10,277,633
1933	102,963	3,843,952	80.6	560,868	11.8	366,786	7.6	4,771,606
1934	246,455	9,200,986	91.2	653,100	6.5	240,072	2.4	10,094,158
1935	112,276	4,191,637	79.4	617,064	11.7	469,812	8.9	5,278,513
1936*	276,582	10,325,727	84.2	1,448,034	11.8	484,764	4.0	12,258,525
<hr/>								
TOTAL	2,518,514	94,024,515	86.3	8,161,482	7.5	6,739,404	6.2	108,925,401
<hr/>								
1936	340,000	12,693,322		500,000				13,193,322
TOTALS	2,858,514	106,717,837		8,661,482				122,118,723

\*Includes up to August 1st, 1936.



COMPARISONS OF UNIT PRICES FOR TREATED CROSS TIES, SWITCH TIES, TIMBER, ETC.,  
AS BETWEEN THE NORTHERN PACIFIC CONTRACT WITH WEST COAST WOOD PRESERVING CO.  
AT SEATTLE, AND THE GREAT NORTHERN CONTRACTS AT HILLYARD.

	N.P.Cont. Jan 1'27	G.N.Cont. June 1'36	G.N.Cont. June '26
1. Cross ties, Douglas or Inland Fir, Ft. B.M.	\$6.50	\$8.96	\$8.33
2. Cross ties, Douglas Fir, equivalent 7x8-8'	.2407	.3319	.3085
3. Cross ties, Tamarack or Larch, FEM	6.50	7.92	8.33
4. Cross Ties, Tamarack or Larch, pr.Tie	.2407	.2933	.3085
5. Cross ties, Lodge pole or Ponderosa Pine, Ft. FM	6.50	7.50	8.33
6. Cross ties, Lodge Pole or Ponderosa Pine, per tie	.2407	.2777	.3085
7. Switch ties, Fir and Larch, FEM	8.00	12.00	12.00
8. Switch ties, Pine, FEM	-	10.00	12.00
9. Bridge timber, Lumber, Fir & Larch, FEM	10.45	12.00	12.00
10. Bridge Timber Lumber, Pine, FEM	-	10.00	12.00
11. Piling, Fir & Larch, per cu.ft.	.14	.15	-
12. Piling, cedar, per cu. ft.	-	.14	-
13. Piling, pine, per cu. ft.	-	.13	-
14. Cross ties, green, FEM (fir)	7.52	10.62	-
15. Cross ties, green, per tie (fir)	.2785	.3933	-
16. Switch ties, green, FEM (fir)	9.02	13.66	-
17. Bridge timber lumber, green, FEM (fir)	11.47	13.66	-
18. Bridge timber lumber, green, (usual lots fir) FEM	11.72	13.66	-
19. Bridge timber lumber, green (small lots fir) FEM	13.05	13.66	-
20. Piling, green fir, per cu.ft.	.2012	.17	-

Note: Item 18 based on 30,000 FEM or over. Item 19 based on charges less than 30,000 FEM. Item 20 based on treating green piling requiring total cylinder time 42 hrs.

The copy of G.N. June 1926 contract is not complete as to schedule of prices.

Note: GN June 1, 1936 contract provides that contractor shall pay to the GN rental for plant of \$50,000 per year in case G.N. offers for treatment 1,750,000 cu. ft. or 21,000,000 FEM. This equal to 561,736 cross ties 7x8-8'. The rental therefore is equal to about 9 cents per tie. The GN guarantees to offer for treatment 1,500,000 cu.ft. per year. In the event less than 1,750,000 cu.ft. is offered the rental drops to \$35,000 per year. A rental of \$35,000 applied to 1,500,000 cu.ft. of cross ties is equal to 432,312 pcs. 7x8-8' ties or 7.2 cents per tie.

The G.N. contract provides that the G.N. shall, in addition, assume the cost to the contractor of all taxes, contributions, or assessments imposed by Federal Social Security Act or any similar acts in the State of Washington, etc.

The N.P. Seattle contractor has an investment of about \$300,000 in treating plant and seasoning yard. The depreciation charge based on ten-year period is ten cents per tie.

SEATTLE WASH.

AUGUST 30, 1936w

Statement 9-A.

COMPARISON OF UNIT PRICES FOR TREATING CROSS TIES, SWITCH TIES, TIMBER, ETC., AS BETWEEN PROPOSED CONTRACT BETWEEN NORTHERN PACIFIC RAILWAY AND WEST COAST WOOD PRESERVING COMPANY AT SEATTLE, AND THE GREAT NORTHERN CONTRACTS AT HILLYARD.

	Proposed N.P. Cont.	G. N. Contracts	
	Jan. 1, 1937	June 1, 1936	June, 1926
1. Cross ties, Douglas or Inland Fir, M.FEM	\$6.25	\$8.96	\$8.33
2. Cross ties, Douglas fir equivalent 7x8-8', per tie	.2331	.3319	.3085
3. Cross ties, Tamarack or Larch, M.FEM	6.25	7.92	8.33
4. Cross ties, Tamarack or Larch, 7x8-8' per tie	.2331	.2933	.3085
5. Cross ties, Lodgepole or Ponderosa Pine, M.FEM	6.25	7.50	8.33
6. do do do (7x8-8') per tie	.2331	.277	.3085
7. Switch ties, Fir and Larch, M.FEM	8.00	12.00	12.00
8. Switch ties, Pine, M.FEM	-	10.00	12.00
9. Bridge timber, lumber, Fir & Larch, M.FEM	10.20	12.00	12.00
10. Bridge timber, lumber, Pine, M.FEM	-	10.00	12.00
11. Piling, Fir and Larch, per cu. ft.	.14	.15	-
12. Piling, cedar, per cu. ft.	-	.14	-
13. Piling, pine, per cu. ft.	-	.13	-
14. Cross ties, green, fir, M.FEM	6.25	10.62	-
15. Cross ties, green, fir, per tie (7x8-8')	.2331	.3933	-
16. Switch ties, green, fir, M.FEM	8.00	13.66	-
17. Bridge timber, lumber, fir, green, M.FEM	11.22	13.66	-
18. Bridge timber, lumber, green, fir, (usual lots) M.FEM	11.47	13.66	-
19. Bridge timber, lumber, green, fir, (small lots) M.FEM	12.85	13.66	-
20. Piling, green fir, per cu. ft.	.2012	.17	-

Note - Item 18 based on 30,000 ft. EM or over.

Item 19 based on charges less than 30,000 FEM.

Item 20 based on treating green piling requiring a total cylinder time of 42 hours.

The copy of G. N. June 1926 is not complete as to schedule of prices.

Note - The G. N. June 1, 1936 contract provides that contractor shall pay to the G. N. rental for plant of \$50,000 per year in case G. N. offers for treatment 1,750,000 cu. ft. or 21,000,000 FEM. This is equal to 561,736 cross ties, 7x8 - 8'. If all the rental were to be absorbed by the G. N. material treated is equal to 8.72¢ per tie. The G. N. guarantees to offer for treatment 1,500,000 cu. ft. per year. In the event less than 1,750,000 cu. ft. is offered the rental drops to \$35,000 per year. A rental of \$35,000 absorbed by the G. N. 1,500,000 cu. ft. or equivalent 492,186 cross ties would amount to 7.26¢ per tie.



Statement 9-A,  
page 2.

Summarizing the various rental absorptions:

1. Rental \$50,000 for 2,000,000 cu. ft. = 2.5¢ per cu. ft., = \$2.08 per M.FM,  
= 7.777¢ per tie.
2. Rental \$50,000 for 1,750,000 cu. ft. = 2.85¢ per cu. ft. = \$2.375 per M.FM,  
= 8.866¢ per tie.
3. Rental \$35,000 for 1,750,000 cu. ft. = 2.00¢ per cu. ft. = \$1.666 per M.FM,  
= 6.222¢ per tie.
4. Rental \$35,000 for 1,500,000 cu. ft. = 2.333¢ per cu. ft. = \$1.941 per M.FM,  
= 7.258¢ per tie.

The G. N. contract of June 1, 1936 effective May 1, 1937 for a period of five years provides that the G. N. shall assume the usual taxes and in addition assume the cost to the contractor of all taxes, contributions, or assessments imposed by Federal Social Security Act, or any similar acts in the State of Washington, etc.

The N. P. Seattle contractor has an investment of about \$300,000 in treating plant and seasoning yard. Based on 300,000 ties per year the amortization in ten years is 10¢ per tie, interest on investment at 6% is 3.33¢ per tie.

Asst. Chief Engr.  
St. Paul, Minn.  
September 14, 1936w

APPROXIMATE ESTIMATE OF AMOUNT OF FOREST PRODUCTS MATERIAL TO BE TREATED AT SEATTLE. TREATED TIES REQUIRED BASED ON ROUGH ESTIMATE OF UNTREATED TIES IN TRACK IN TERRITORY WEST OF YAKIMA AND PROBABLE RENEWALS OF TREATED TIES PLACED SINCE 1908. SWITCH TIES BASED ON ADJUSTED AVERAGE OF LAST FIVE YEARS. LUMBER AND PILING BASED ON AVERAGE OF LAST TEN YEARS.

Renewal Year	Number	Ties		Switch Ties		Piling & Timber		Total M.FEM
		M.FEM	%	M.FEM	%	M.FEM	%	
1937	220,000	8,213	88	500	5	600	7	9,313
1938	158,000	5,899	84	500	7	600	9	6,999
1939	164,000	6,123	85	500	7	600	8	7,223
1940	170,000	6,347	85	500	7	600	8	7,447
1941	180,000	6,720	86	300	6	600	8	7,820
1942	190,000	7,093	87	500	6	600	7	8,193
1943	203,000	7,579	87	500	6	600	7	8,679
1944	220,000	8,213	88	500	5	600	7	9,313
1945	238,000	8,865	89	500	5	600	6	9,965
1946	254,000	9,483	90	500	5	600	5	10,583
TOTALS	1,997,000	74,553	87	5,000	6	6,000	7	85,553

Assistant Chief Engineer  
St. Paul, Minnesota  
September 10, 1936w



QUANTITIES OF MATERIALS TREATED AND AMOUNTS PAID SEATTLE TREATING PLANT 1927 TO AUGUST 1, 1936.

YEAR	CROSS TIES			SWITCH TIES			LUMBER			PILING			TOTAL
	M.FEM	AMT. PAID	% :	M.FEM	AMT. PAID	% :	M.FEM	AMT. PAID	% :	Lin. FT.	AMT. PAID	% :	
1927	7,156	\$ 48,072	53	596	\$ 5,837	6	361	\$11,057	12	83,325	\$26,077	29	\$ 91,043
1928	18,576	124,687	80	1,063	10,536	7	511	5,212	3	66,380	15,503	10	155,938
1929	15,985	105,512	83	1,263	12,206	10	301	3,476	3	21,235	5,409	4	126,603
1930	10,278	67,658	86	-	-	-	520	8,958	11	9,138	2,076	3	78,692
1931	8,496	56,158	74	1,241	11,857	15	319	7,020	9	6,847	1,255	2	76,290
1932	9,583	62,924	86	720	6,480	9	197	2,545	4	3,611	848	1	72,797
1933	4,019	26,263	75	561	4,814	14	190	2,484	7	8,415	1,459	4	35,020
1934	9,590	62,598	91	653	5,328	8	38	508	1	1,290	274	-	68,708
1935	4,343	28,418	82	617	4,957	14	110	1,525	4	-	-	-	34,900
1936	11,137	72,852	85	1,240	10,499	12	180	2,335	3	-	-	-	85,686
TOTAL	99,163	\$655,142	79	7,954	\$72,514	9	2,727	\$45,120	6	200,241	\$52,901	6	\$825,677
Avge per MFEM		\$6.61		MFEM	\$9.12		M.FEM	\$16.55		Lin.Ft.	\$0.26		
Avge Cost per Tie		\$0.26											

Asst. Chief Engineer  
St. Paul, Minn.  
September 10, 1936w

RECORD OF COMMERCIAL LOADS OF TREATED FOREST PRODUCTS FROM THE SEATTLE PLANT OF THE WEST COAST WOOD PRESERVING COMPANY, TAKEN FROM THE RECORDS OF THE WOOD PRESERVING COMPANY BY C. R. HOPKINS, ASSISTANT GENERAL SUPERINTENDENT, TIMBER PRESERVATION, DURING AUGUST, 1936. SHORT HAULS WAS CONSIDERED AS BEING WEST OF BUTTE, AND TRANSCONTINENTAL AS EAST OF BUTTE.

<u>Year 1935</u>	<u>N. P.</u>	<u>%</u>	<u>: U. P.</u>	<u>G. N.</u>	<u>Milw.</u>	<u>Total</u>
Transcontinental	46	45	26	13	17	102
Short Haul	38	51	4	21	12	75
Totals	84	47	30	34	29	177
<u>Year 1936 - 1st 6 months</u>						
Transcontinental	29	56	10	8	5	52
Short Haul	67	55	10	34	10	121
Totals	96	55	20	42	15	173
<u>Year 1936 - July 1st to Aug. 17th:</u>						
Transcontinental	8	40	6	5	1	20
Short Haul	25	56	5	15	-	45
Totals	33	51	11	20	1	65
<u>Grand Totals</u>						
Transcontinental	83	48	42	26	23	174
Short Haul	130	54	19	70	22	241
Totals	213		61	96	45	415
Percentages		51.3%	14.6%	23.1%	11.0%	100%

Asst. Chief Engr.  
St. Paul, Minn.  
September 14, 1936w



Statement #13

GREAT NORTHERN HILLYARD TREATING PLANT UNDER CONTRACT WITH NATIONAL POLE AND TREATING COMPANY CONTRACT DATED JUNE 1, 1936.

- (A) Estimated cost to G. N. for treating fir cross ties, 7x8 - 8', treating in next five-year period slightly less than 1,750,000 cubic feet per year. Rental \$35,000 per year.

	<u>M.FRM</u>	<u>Per Tie</u>
1. Treating fir ties 7x8 - 8'	\$8.96	\$.3319
2. Rental received, \$35,000.	1.66	.0622
Net Cost	\$7.30	\$.2697

Indirect Items:

1. Taxes on plant	\$.0120
2. Insurance on plant	.0010
3. State Industrial Tax and Workmen's Compensation	.0017
4. Federal Security Tax	.0011
5. Business and Occupational Tax	.0008
6. Total Tax	\$.0166
7. Total Cost to G. N. (2) plus (5)	\$.2863
8. N. P. Cost, Seattle (new contract)	.2331
9. Difference	\$.0532
10. Increase	22.8%
11. G. N. Total Investment \$500,000, Interest at 5%, Average \$12,625	\$.0243
12. Grand Total Cost to G. N. (7) plus (11)	.3105
13. G. N. Total Investment \$500,000, Depreciation at 3% = \$15,000 =	.0264
14. Total cost incl. Interest & Depreciation(12)plus (13)	.3369

(B) Apparent Profit to Contractor:

1. Received from G.N. at \$8.96 M.FRM, 7x8-8' per tie	\$.3319
2. Rental payment to G. N.	.0622
Gross Return	\$.2697
1. Unloading and stacking green ties	\$.01125
2. Removing seasoned ties to conveyor	.00250
3. Conveyor work	.00250
4. Boring, edging, and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - steam and power	.02000
7. Plant Labor, operation and repairs	.02100
8. Material and supplies	.01500
9. Maintenance of yard tracks, 6 miles, \$3500.	.00311
10. Interest and depreciation on cranes and locomotive, \$60,000 x 10% = \$6,000.	.01639
11. General and plant supervision - \$22,000	.03888
12. Total Cost to Contractor	.14588
13. Gross Return	.26970
Apparent Net Profit	.12382
Net Profit	84.87%

3

SUMMARY --(Restated):

	<u>M.FEM</u>	<u>Per Tie</u>
1. G. N. Payment to contractor	\$8.96	\$.3319
2. G. N. Indirect item costs (taxes etc)	.44	.0186
3. G. N. investment \$500,000, Interest at 5% = \$12,625.	.65	.0243
4. G. N. Investment \$500,000, Depreciation at 3% = \$15,000	.70	.0264
5. Total Gross Costs	10.75	.3992
6. Rental Received from Contractor, \$35000.	1.66	.0622
7. Net Cost	9.09	.3370
8. N. P. Costs Seattle (new contract)	6.25	.2331
Difference	2.84	.1039
Increase		44.56%
1. Estimated direct costs to contractor	\$2.427	\$.09061
2. Interest and depreciation, equipment etc. \$60,000 x 10% = \$6,000	.439	.01639
3. General and plant supervision, \$22,000.	1.042	.03888
4. Sub Total	3.908	.14588
5. Rental payment to G. N., \$35,000.	1.667	.06222
6. Total	\$5.575	\$.20810
7. Receives from G. N.	8.891	.33190
Apparent Net Profit	\$3.316	\$.1238
Net Profit		59.48%

Asst. Chief Engineer  
St. Paul, Minnesota  
September 17, 1936w



Statement #14

COST OF CROSS TIES TREATED FOR THE SP&S AT ST. HELENS AND HILLYARD DURING 1932 AND 1936. SPECIFICATIONS REQUIRE BORING, INCISING AND ADZING. MIXTURE TREATMENT 50/50, SIX LBS. PER CUBIC FOOT.

			<u>Treatment Cost</u>	
			<u>Per M.FM</u>	<u>Per Tie</u>
1. Hillyard 1932 -	37,725 ties			
	1,443,563 FM	\$13,713.85	\$9.50	\$.3635
	Preservatives	8,964.53	6.21	.2376
	Total Cost	22,678.38	15.71	.6011
2. Hillyard 1936 -	28,214 ties			
	1,184,988 FM	\$10,072.40	\$8.50	\$.3570
	Preservatives	6,837.38	5.77	.2423
	Total Cost	16,909.78	14.27	.5993
3. St. Helens 1936.	19,947 ties			
	775,529 FM	\$ 6,615.26	\$8.53	\$.3317
	Preservatives	4,474.80	5.77	.2243
	Total cost	11,090.06	14.30	.5560

Note - Data furnished by A. J. Witchel, Sept. 14, 1936.

Asst. Chief Engineer  
St. Paul, Minnesota  
September 17, 1936w

EXHIBIT "A" ATTACHED AND A PART OF CONTRACT DATED \_\_\_\_\_ BETWEEN THE  
NORTHERN PACIFIC RAILWAY COMPANY AND THE WEST COAST WOOD PRESERVING COMPANY.

Specifications covering the seasoning and treatment of cross and switch ties, timber, lumber and piling.

Seasoning

1. Green ties, timber, lumber and piling will be delivered by the Railway Co. at the plant of the Creosoting Co. The Creosoting Co. will unload all material and pile same for storage and seasoning, using a spacing which local experience indicates is the most favorable for efficient seasoning. Material shall be stored on non-decaying sills and the ground must be kept free of weeds and vegetation or fungus growths which would be injurious to the timber.

2. Material shall be permitted to remain in the seasoning yard until the Railway Company representative considers it suitable for treatment. It is the intention to season material to a point where it can be successfully treated, without artificial seasoning, to obtain the desired penetration.

3. The Creosoting Co. shall save all car stakes, separators, etc., received with incoming material and make use of same for separators in seasoning, staking outgoing loads, etc.

Boring, Adzing and Incising

4. Before treatment all cross ties shall be bored for spikes, adzed for seating tie plates and incised by Greenlee Brothers or other approved machine. The incisions are to be not less than three quarters (3/4) of an inch in depth and so spaced as to permit a uniform distribution of the preservative to the depth of the incisions. The Railway Co. shall furnish plans showing the boring spacing required for the different sections and also the dimensions of adzing areas.

5. Incising of switch ties, timber and lumber will be optional with the Railway Company.

Preservatives

6. The preservative for cross and switch ties shall be a 50-50 mixture of creosote and petroleum oil. The creosote shall conform to the American Railway Engineering Association specifications for Grade I Creosote Oil and be thoroughly mixed before using with California Crude Oil with an asphaltic base. For timber, lumber and piling the preservative shall be straight American Railway Engineering Association Grade I Creosote. The Railway Company may from time to time change the proportions of the mixture treatment or the specifications for Creosote and Oil.

Moisture Content

7. All material to be treated in any one charge must have approximately the same moisture content.

Material Sizes and Stripping

8. Material four inches or less in thickness must be treated separately from timbers of a greater thickness. Sufficient strips must be placed between tiers in any case where, in the judgment of the Inspector, stripping is necessary to afford free circulation of preservatives around each piece.

Artificial Seasoning

9. When material has not been air seasoned, it may be artificially seasoned, at the option of the Railway Co., in the treating cylinders by boiling under vacuum at temperatures ranging from 180° F. to a maximum of 200° F. as follows:

10. After the material is placed in the treating cylinder, preservative heated to about 160° F. shall be admitted until the material is completely immersed. A vacuum shall then be created and gradually raised until a minimum of 20 inches is



reached and this vacuum is to be maintained until the condensation passing off from the timber and accumulated in the hot well of the condenser does not exceed one-tenth of a pound per cubic foot of timber in charge per hour.

11. After the completion of the seasoning period, or bath, Paragraph 12, upon breaking the vacuum the preservative shall be immediately drained completely from the treating cylinder. This draining need not be done in case the water content of the preservative in the cylinder is not objectionable in the opinion of the inspector.

#### Preparatory Bath for Air Seasoned Material

12. All thoroughly air seasoned material must be held in a hot oil bath for a period of 2 to 8 hours at a temperature of about 180° F. in order to obtain the necessary absorption without the use of excessive pressure for a long period of time.

#### Treatment

13. Empty Cell Process without initial air pressure shall be used.

#### Injection of Preservative Under Pressure

14. Following the heating or the artificial seasoning period, the cylinder shall be filled with Preservative and pressure applied as required to a maximum of 160 pounds per square inch and maintained until the specified penetration or final absorption of preservative has been obtained. The maximum pressure in the case of cross and switch ties shall be 150 pounds per square inch. The temperature of the preservative during the pressure period shall be as high as possible, with a minimum limit of 160° F. and a maximum of 200° F.

15. After pressure is completed the cylinders shall be emptied of preservatives and a vacuum of at least 25 inches of mercury promptly created and maintained for a sufficient period of time to free the material of dripping preservative.

#### Penetration Cross and Switch Ties and Piling

16. The minimum penetration of preservative shall be 3/4 of an inch. Representative ties from each charge must be tested for penetration, and at least 75% of the ties so tested must show the above specified minimum. In determining penetration, light discoloration of the wood from treatment shall not be considered.

The minimum penetration on every pile shall be not less than one inch of black oil.

#### Penetration Timber and Lumber

17. The average depths of penetration for the specified amount of preservative shall be as follows:

Size	12#	14#	16#
3"x12" & 4"x12"	--	--	.50 inch
6"x12"	.50 inch	.55 inch	.65 inch
12"x12" & larger	.75 inch	.85 inch	1.00 inch

The penetration must be based on black oil. Representative pieces from each charge must be tested for penetration and at least 75% of these pieces so tested must show the above specified minimum.

#### Penetration and Final Retention - General

18. The penetration rather than the final retention of preservative shall govern as to the acceptance of treatment. The preservative finally retained by cross and switch ties shall be as nearly as possible 7 pounds per cubic foot of timber. For piles the retention ~~shall~~ to be similarly 16 pounds per cubic foot of timber. For timber and lumber this penetration is likewise outlined in paragraph 17. The treating plant shall be provided with the necessary gauges, measuring devices and appliances required to observe and record the gross and final retention of preservative in order that the Railway Company may be assured of obtaining the minimum

specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

#### Retreatment

20. If the penetration or the final retention of preservative should be found unsatisfactory, retreatment or continuation of treatment may be required. In case the unsatisfactory condition is due to the fault of the Creosoting Company's equipment or methods, the extra cost of treatment shall be at the expense of the Creosoting Co. In case segregated material or the entire charge is returned to the cylinder for additional treatment, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

#### Damaged Material

21. Material damaged through improper treatment or handling by the Creosoting Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

#### General Conditions

22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

23. All holes bored for test purposes must be plugged with creosoted plugs furnished by the Creosoting Co.

24. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

25. The Creosoting Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.



EXHIBIT "A" ATTACHED AND A PART OF CONTRACT DATED \_\_\_\_\_ BETWEEN THE  
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2. Material shall be permitted to remain in the seasoning yard until the Railway Company representative considers it suitable for treatment. It is the intention to season material to a point where it can be successfully treated, without artificial seasoning, to obtain the desired penetration.

3. The Creosoting Co. shall save all car stakes, separators, etc., received with incoming material and make use of same for separators in seasoning, staking outgoing loads, etc.

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4. Before treatment all cross ties shall be bored for spikes, adzed for seating tie plates and incised by Greenlee Brothers or other approved machine. The incisions are to be not less than three quarters (3/4) of an inch in depth and so spaced as to permit a uniform distribution of the preservative to the depth of the incisions. The Railway Co. shall furnish plans showing the boring spacing required for the different sections and also the dimensions of adzing areas.

5. Incising of switch ties, timber and lumber will be optional with the Railway Company.

Preservatives

6. The preservative for cross and switch ties shall be a 50-50 mixture of creosote and petroleum oil. The creosote shall conform to the American Railway Engineering Association specifications for Grade I Creosote Oil and be thoroughly mixed before using with California Crude Oil with an asphaltic base. For timber, lumber and piling the preservative shall be straight American Railway Engineering Association Grade I Creosote. The Railway Company may from time to time change the proportions of the mixture treatment or the specifications for Creosote and Oil.

Moisture Content

7. All material to be treated in any one charge must have approximately the same moisture content.

Material Sizes and Stripping

8. Material four inches or less in thickness must be treated separately from timbers of a greater thickness. Sufficient strips must be placed between tiers in any case where, in the judgment of the Inspector, stripping is necessary to afford free circulation of preservatives around each piece.

Artificial Seasoning

9. When material has not been air seasoned, it may be artificially seasoned, at the option of the Railway Co., in the treating cylinders by boiling under vacuum at temperatures ranging from 180° F. to a maximum of 200° F. as follows:

10. After the material is placed in the treating cylinder, preservative heated to about 160° F. shall be admitted until the material is completely immersed. A vacuum shall then be created and gradually raised until a minimum of 20 inches is

reached and this vacuum is to be maintained until the condensation passing off from the timber and accumulated in the hot well of the condenser does not exceed one-tenth of a pound per cubic foot of timber in charge per hour.

11. After the completion of the seasoning period, or bath, Paragraph 12, upon breaking the vacuum the preservative shall be immediately drained completely from the treating cylinder. This draining need not be done in case the water content of the preservative in the cylinder is not objectionable in the opinion of the inspector.

#### Preparatory Bath for Air Seasoned Material

12. All thoroughly air seasoned material must be held in a hot oil bath for a period of 2 to 8 hours at a temperature of about 180° F. in order to obtain the necessary absorption without the use of excessive pressure for a long period of time.

#### Treatment

13. Empty Cell Process without initial air pressure shall be used.

#### Injection of Preservative Under Pressure

14. Following the heating or the artificial seasoning period, the cylinder shall be filled with Preservative and pressure applied as required to a maximum of 160 pounds per square inch and maintained until the specified penetration or final absorption of preservative has been obtained. The maximum pressure in the case of cross and switch ties shall be 150 pounds per square inch. The temperature of the preservative during the pressure period shall be as high as possible, with a minimum limit of 160° F. and a maximum of 200° F.

15. After pressure is completed the cylinders shall be emptied of preservatives and a vacuum of at least 25 inches of mercury promptly created and maintained for a sufficient period of time to free the material of dripping preservative.

#### Penetration Cross and Switch Ties and Piling

16. The minimum penetration of preservative shall be 3/4 of an inch. Representative ties from each charge must be tested for penetration, and at least 75% of the ties so tested must show the above specified minimum. In determining penetration, light discoloration of the wood from treatment shall not be considered.

The minimum penetration on every pile shall be not less than one inch of black oil.

#### Penetration Timber and Lumber

17. The average depths of penetration for the specified amount of preservative shall be as follows:

Size	12#	14#	16#
3"x12" & 4"x12"	--	--	.50 inch
6"x12"	.50 inch	.55 inch	.65 inch
12"x12" & larger	.75 inch	.85 inch	1.00 inch

The penetration must be based on black oil. Representative pieces from each charge must be tested for penetration and at least 75% of these pieces so tested must show the above specified minimum.

#### Penetration and Final Retention - General

18. The penetration rather than the final retention of preservative shall govern as to the acceptance of treatment. The preservative finally retained by cross and switch ties shall be as nearly as possible 7 pounds per cubic foot of timber. For piles the retention ~~shall~~ to be similarly 16 pounds per cubic foot of timber. For timber and lumber this penetration is likewise outlined in paragraph 17. The treating plant shall be provided with the necessary gauges, measuring devices and appliances required to observe and record the gross and final retention of preservative in order that the Railway Company may be assured of obtaining the minimum



specified penetration with the minimum amount of preservative.

19. At the option of the inspector the total final retention shall be determined by weighing sufficient representative material for any charge before and after treatment and making necessary corrections for loss in its moisture content. These checks as well as those from gauge readings shall be used as approximate checks against the preservative charged to the Railway Company. The Railway Co. may change the minimum penetration requirements from time to time.

#### Retreatment

20. If the penetration or the final retention of preservative should be found unsatisfactory, retreatment or continuation of treatment may be required. In case the unsatisfactory condition is due to the fault of the Creosoting Company's equipment or methods, the extra cost of treatment shall be at the expense of the Creosoting Co. In case segregated material or the entire charge is returned to the cylinder for additional treatment, the additional treating time shall be considered continuous with the original treating time. The additional treating time shall begin after the normal cylinder temperature and pressure have been restored.

#### Damaged Material

21. Material damaged through improper treatment or handling by the Creosoting Company shall be paid for at the invoice cost of the material to the Railway Co. Water bursts and heat checks shall be considered evidences of improper treatment.

#### General Conditions

22. The foregoing specified operations must be continuous without idle periods between the various stages of the process.

23. All holes bored for test purposes must be plugged with creosoted plugs furnished by the Creosoting Co.

24. All material must be handled with care, particularly after treatment, so as not to damage the edges or break through the creosoted shell, exposing untreated wood. Sharp pointed tools, such as canthooks, peavies, pickaroons and crowbars must not be used except in the ends of timbers. Damaged material will not be accepted.

25. The Creosoting Co. shall maintain the necessary thermometers and gauges to indicate and record accurately the conditions at all stages of treatment, and all equipment shall be maintained in a condition satisfactory to the Railway Co.

26. The Creosoting Co. shall permit the Railway Co. inspectors or representatives to make all necessary tests of material and equipment pertaining to work covered by this specification, and shall cooperate in the making of such tests.

27. The Creosoting Company shall furnish for the use of the Railway Co. inspectors or representatives, all necessary laboratory supplies and facilities for making tests required by this specification.

(D) Construction of New Treating Plant:

When the proposal to treat ties on the Coast was up ten years ago, several concerns offered proposals based on the construction of new plants. At that time there was a prospect of obtaining Coast business of the G. N. and the Milwaukee, in addition to the N. P. requirements. These proposals failed because they were either out of line with the Colman bid, or they required a guarantee of volume which could not be met. The N. P. volume will be considerably less in the future than it has been, and the G. N. and Milwaukee business is not available, and there is therefore no prospect that any one would consider making an investment in a new treating plant, particularly since there is already an excess of treating capacity for the commercial business originating on the Coast.

(E) Paradise Plant:

In view of the foregoing comments on other plants, it is apparent that the N. P. plant at Paradise offers the only basis of comparative cost comparisons for treatment of ties to be used in the Coast territory.

Statement 1-A shows costs of treating Coast timber ties under proposed new contract at Seattle.

Statement #2 shows costs of treating Inland Empire ties at Paradise and shipping to the Coast.

Statement #3 shows cost of treating Coast fir ties at Paradise and shipping them back to the Coast.

Summarized, these costs are as follows:

Per Tie

- |  |          |
|--|----------|
| 1. Treated Douglas Fir tie, treated at Seattle under proposed contract     | \$ .9908 |
| 2. Treated Inland Empire tie, treated at Paradise and shipped to Coast     | .9943    |
| 3. Treated Coast Douglas fir tie, treated at Paradise and shipped to Coast | 1.0561   |

This shows that treatment of ties under proposed Seattle contract is essentially the same as cost of treating Inland Empire ties and shipping them to the Coast. Cost of treating Coast Douglas fir at Paradise and shipping treated ties back to the Coast is 6.53¢ per tie in excess of proposed Seattle contract cost. This would amount to about \$13,000. per year on an estimated average future use of 200,000 ties per year. These figures take into consideration the \$1 differential at present existing between tie timber costs in the Inland Empire and on the Coast. This differential was formerly \$2 per MFTM. Several years before we treated ties at Seattle under contract, we shipped a large number of Douglas fir ties to Paradise for treatment in order to assist in breaking down the differential and also because the mills in the Inland Empire were not in a position to furnish all the ties we required. Attention



should be drawn to the fact that the costs for treatment at Paradise are not exactly on an out-of-pocket basis because of the inclusion of interest and depreciation on the investment amounting to \$.0220 per tie as shown on statement #2.

There would undoubtedly sooner or later be developed some opposition from lumber interests on the Coast if we made a regular practice of shipping Inland Empire tie timber to the Coast. It is, of course, true that the G. N. have been following this practice for years, and so far as I am aware no vigorous protests have been made against them. They may possibly be explained by the fact that the G. N. controls the rather extensive lumber purchases for the Western Fruit Express, which are placed with competitive mills on the Coast.

The G. N. buy few if any of their ties for the Hillyard plant from large commercial lumber mills in the Inland Empire territory. They have made it a practice for years to encourage the development of small portable sawmills engaged exclusively in the production of ties, and they claim to produce in this way ties at as low or lower costs in the Inland Empire than they would have to pay on the Coast. A considerable number of these ties come from their own territory north of Spokane which is not competitive in any large degree with other railroads as a source of tie timber.

(F) Treatment of commercial forest products in the Coast territory:

The treatment of forest products on the North Pacific Coast for use at local ports, and for shipment by water for domestic use or export to the Orient, is confined to the St. Helens plant and the two plants of the West Coast Wood Preserving Company, namely, at Seattle and at Eagle Harbor. There is also a plant under Canadian ownership located at Vancouver, B.C. A considerable quantity of forest products originating on the North Pacific Coast is treated in transit for movement to the interior, mostly to states west of the Mississippi River. This business is participated in by the St. Helens plant, the plant at The Dalles, Ore., the two plants of the West Coast Wood Preserving Company, and the plant at Hillyard, Washington. The Northern Pacific participates only in the haul on this business from the output of the West Coast Wood Preserving Company. The number of cars of treated forest products for the year 1935 and the first six months of 1936 is shown on statement #12. This business is divided between the Northern Pacific, Union Pacific, Great Northern, and Milwaukee. This statement shows that the amount allocated to the Northern Pacific is 51.3%.

The commercial plants at Hillyard and The Dalles, Ore., are not in a position to participate in the treating in transit of forest products used on the Coast or shipment by water from Puget Sound points.

L. YAGER

Revised, St. Paul, Minn.,  
Sept. 21, 1936w

TENTATIVE DRAFT OF CONTRACT

CONTRACT made this \_\_\_\_ day of \_\_\_\_\_, A. D. 1936, between the Northern Pacific Railway Company, a Wisconsin corporation hereinafter called the "Railway Company," and the West Coast Wood Preserving Company, a Washington corporation hereinafter called the "Creosoting Company."

In consideration of the mutual dependent promises stated in this contract the parties agree:

I. The Creosoting Company shall store for seasoning and treat at its plant located in the city of Seattle, Washington, such forest products as may be offered by the Railway Company from time to time in accordance with specifications in Exhibit "A" attached and made part of this contract. The term "forest products" used herein is inclusive of cross ties, bridge ties and switch ties, timber, lumber, piling, and poles. It is understood and agreed that: (a) The Railway Company reserves the right to treat any portion or all of the forest products used by it in the territory tributary to the Creosoting Company's Seattle plant, in any one or more of the Railway Company's presently owned and individually operated treating plants. (b) The Railway Company shall offer to the Creosoting Company for treatment under the terms of this contract all forest products not reserved under the provisions of the foregoing paragraph (a).

II. The Creosoting Company agrees that its plant shall be maintained during the term of this agreement in such degree of working efficiency that the capacity of the plant shall be adequate at all times to treat the yearly requirements of the Railway Company.

III. The Railway Company will notify the Creosoting Company in writing prior to the first of October of each year of the approximate number of cross ties and other forest products which it desired to have stored for seasoning and subsequent treatment during the following calendar year.

IV. The Railway Company will furnish open cars, in so far as may be possible, for delivery of untreated material and for shipment of treated material. The Railway Company at its own cost and expense will do all required switching of its cars of forest products billed to and from the plant. The Creosoting Company agrees to make requests for only such switching as is reasonably necessary and such switching shall be done so far as is practicable at times most convenient to the Railway Company between the hours of 7:00 A.M. and 6:00 P.M.



V. The forest products to be furnished hereunder shall be delivered on cars at the plant of the Creosoting Company. The Creosoting Company shall promptly unload cars and stack the material in the storage yard of the plant for seasoning. The Railway Company in making deliveries to the Creosoting Company shall have regard to its capacity for receiving and stacking material. The Creosoting Company shall pay the Railway Company compensation for any delays in unloading said cars in accordance with the rates set up in the Railway Company's published demurrage tariffs whenever eight (8) or less cars are delivered per day. Whenever more than eight (8) cars per day shall be delivered the expense incident to the detention of cars for unloading shall be assumed by the Railway Company. The Creosoting Company will accept delivery of forest products on scows or in rafts alongside its plant under the same conditions as outlined for delivery on cars, except that the Creosoting Company will not be required to pay the Railway Company for delays in unloading such scows or rafts.

VI. All cross ties will be properly segregated by grades on cars by the Railway Company to facilitate stacking for seasoning and subsequent treatment by grades. Switch ties, timber and piling delivered shall be sorted by the Creosoting Company, at its own expense, for its convenience in handling for treatment.

VII. All treated material shall be ~~un~~loaded and billed as directed by the Railway Company. Cross ties will be loaded by grades and rail borings. Switch ties will be loaded by lengths.

The Railway Company shall furnish promptly all cars required to ship out treated material. The Creosoting Company agrees to give the Railway Company at least five days' notice as to the time such cars are required.

VIII. The Creosoting Company shall provide fire protection for seasoning and storage yard satisfactory to the Railway Company.

The forest products shall remain the property of the Railway Company and be insured by it against loss by fire.

IX. The Creosoting Company agrees to count and tally material received in each car as soon as possible after receipt of car at its plant, either before or immediately after unloading, against invoice or inspection reports furnished by the Railway Company and to mail reports of such tally to the Railway Company representative immediately after each invoice or inspection report has been tallied.

The Creosoting Company agrees that, as far as practicable, it shall have

Painted on each stack the initial, number, and out turn of each car from which material is unloaded, and the date of unloading.

The Creosoting Company agrees to return to the Railway Company the identical material shipped to it by the Railway Company after said material has been treated, and in case there should be any shortage whatever, the Creosoting Company agrees to pay the Railway Company therefor at the market price at Seattle, Washington, of like material at the time the shortage is discovered; provided, however, that the Creosoting Company shall not be responsible for shortage resulting from fire or causes which are clearly beyond its control. Joint inventories of all forest products shall be taken at least every six months, and discrepancies found adjusted at that time.

The Creosoting Company agrees to furnish reports of all material delivered, shipped, used and on hand at regularly stated intervals as may be required by the Store Department or the Insurance Department of the Railway Company.

X. The Railway Company will furnish all creosote and petroleum oil required to treat its material under this agreement. The Creosoting Company agrees to unload and store all creosote and petroleum oil furnished by the Railway Company in railroad tank cars at the plant. The Creosoting Company agrees to set aside a storage with a capacity of 300,000 gallons for creosote furnished by the Railway Company. Creosote furnished by the Railway Company from vessels or barges shall be delivered into the storage tank without expense to the Creosoting Company. Should the Railway Company elect to permit the Creosoting Company to purchase creosote and oil for it, the prices to be paid and the quantities to be purchased for its account must be approved by the Railway Company and the material must conform to the current specifications of the Railway Company to be kept on file with the Creosoting Company. The Railway Company shall carry the insurance and pay the taxes on creosote and oil stored for it by the Creosoting Company, and agrees to pay promptly all invoices covering creosote and oil purchased with its authority for its account.

XI. The Creosoting Company agrees to provide storage tanks of suitable capacity to store the preservatives required for treating the material of the Railway Company, together with working tanks and proper gauges to insure accurate and satisfactory measurements of creosote and oil used in the treatment of the different classes of material for the Railway Company.

The Creosoting Company may, with the written consent of the Railway Company first had and obtained, use the preservatives belonging to the Railway Company for the purpose of treating forest products for other concerns in the same plant, and



the Creosoting Company shall thereupon promptly replace preservatives so used with other preservatives meeting the specifications of the Railway Company and shall permit no delays in the treatment of Railway Company material to result from such use. In case the Creosoting Company shall be permitted such use of Railway Company preservatives, then joint inventories of preservatives shall be made at the end of each month or at any other appropriate time for the purpose of adjusting surplus or deficits. Any surplus or deficit must be pro-rated on the relative final retention of preservatives for the different classes of material treated for the parties concerned.

XII. The Railway Company desires to have its cross ties treated during the period from August 1st to December 31st of each year. The Creosoting Company agrees to use reasonable efforts with due regard to the business offered by other customers and the treating capacity of its plant to treat the yearly requirements in this interval if sufficiently properly seasoned ties are available. If for any reason the Creosoting Company at any time cannot with reasonable effort carry out the aforementioned preferential arrangement, the Railway Company agrees to have delivered green ties in advance of requirements so that sufficient seasoned ties will be available for treatment at approximately uniform monthly rates for the yearly requirements.

XIII. The Creosoting Company agrees to store treated ties in its storage yard up to the convenient capacity for temporary storage at the request of the Railway Company. The storage and extra handling involved in loading into cars shall be compensated for at a price scheduled in this agreement.

XIV. The Creosoting Company agrees that upon the written request of the Railway Company to do so, it will accept any modification, changes or substitutions in the specifications in Exhibit "A" hereinbefore mentioned, provided such modifications, changes or substitutions will not require the purchase of any additional equipment, or increase the cost to the Creosoting Company or lessen the plant capacity.

The Railway Company agrees that in the event a change of process is made, at its request, it will pay the Creosoting Company any royalty the Creosoting Company may be required to pay in consequence thereof, and will also protect the Creosoting Company against all claims pertaining thereto.

XV. The Railway Company, through its designated representatives or agents, shall have access at all reasonable times to the plant and premises of the Creosoting Company and the right to inspect all operations therein, and shall be furnished all necessary and proper facilities for testing the preservatives employed and the amount absorbed by each charge of ties and other material treated for the Railway Company.

The Creosoting Company shall furnish records on forms furnished by the Railway Company of all treating operations to correspond to that which the Railway Company keeps at its own treating plants.

XVI. In case of any dispute or difference arising as to the interpretation of any sections herebefore set out, the said dispute and causes of differences shall be referred to arbitration and determination of a single arbitrator, if the parties hereto agree upon one; otherwise to three arbitrators - one to be appointed by each of the parties hereto and the third arbitrator to be nominated and appointed by the first named arbitrators. Should the first named arbitrators fail to agree upon the third arbitrator, then such selection shall be left to a Judge of the United States District Court for the District of the State of Washington. The decision of the single arbitrator or a majority of the three arbitrators shall be final and binding upon the parties. Pending the award of arbitration, there shall be no interruption in the transaction of business pursuant to this agreement and statements and payments in respect thereto shall be made in the same manner as prior to arising of such differences.

Each party shall pay for services of and all personal expenses incurred by arbitrator chosen by or for it and both parties shall jointly and equally pay for the services and expenses of the single or third arbitrator, together with all other and different expenses of the arbitration.

XVII. If at any time during the term of this agreement the operation of the Creosoting Company's plant shall be temporarily suspended because of fire, explosion, strikes or other causes not within its control, the time during which the operation of this plant shall be suspended shall not be counted as a part of the term of this agreement, and a corresponding additional time shall be given it for performing its obligations under this agreement; provided, however, in case of the total or partial destruction of the said plant by fire or other cause the Creosoting Company shall promptly repair, rebuild and restore the same to substantially the same condition in which it was before such total or partial destruction and pending such reconstruction the Railway Company may remove its ties and other material from the seasoning yard, untreated or for use/if desired for treatment at ~~the~~ its own or some other commercial plant.

XVIII. The Railway Company agrees to pay to the Creosoting Company for work performed and services rendered, as specified in this agreement, the following prices:



- A-1 For the treatment of all seasoned cross ties, per thousand feet board measure \$6.25
- A-2 For treatment of unseasoned cross ties taken direct from incoming railroad cars, per thousand feet board measure \$6.25
- A-3 For treatment of unseasoned cross ties taken from stock piles in seasoning yard, per thousand feet board measure \$6.70
- B-1 For the treatment of all seasoned switch ties, per thousand feet board measure \$8.00
- B-2 For the treatment of unseasoned switch ties taken direct from incoming railroad cars, per thousand feet board measure \$8.00
- B-3 For the treatment of unseasoned switch ties taken from stock piles in seasoning yard, per thousand feet board measure \$8.60
- B-4 For the treatment of bridge ties in cylinder capacity lots the conditions and prices of B-1, B-2 and B-3 shall apply. For the treatment of bridge ties in less than cylinder capacity lots the conditions and prices of C-1, C-2, and C-3 shall apply.
- C-1 For the treatment of all sawed material other than cross ties and switch ties in cylinder charges of 30,000 feet board measure or less (the treating company being given the option of treating such charges separately or mixed with commercial material) per thousand feet board measure \$12.80
- C-2 For the treatment of all sawed material other than cross ties and switch ties in cylinder charges in excess of 30,000 feet board measure which require a time duration of not longer than twelve (12) actual treating hours, per thousand feet board measure \$10.20
- C-3 For the time in excess of twelve (12) actual treating hours required for treating material covered by paragraph C-2, per cylinder per hour or fraction thereof \$5.10
- D-1 For the treatment of all piling, poles and other similar material which requires a time duration not longer than twelve (12) actual treating hours, the Creosoting Company being given the option of treating quantities of less than a full cylinder charge either separately or combined with commercial material, per cubic foot \$0.14
- D-2 For time in excess of twelve (12) actual treating hours required for treating material covered by paragraph D-1, with the understanding that where material is treated in the same charge with commercial material the time over twelve (12) actual hours will be pro-rated between the Railway and commercial material in the proportion that the volume of the material of each bears to the total volume in the charge, per cylinder per hour or fraction thereof.. \$5.10
- D-3 The prices quoted in paragraphs D-1 and D-2 are predicated on the Railway Company having its own stocks of piling available for treatment. In the event the Railway Company does not have a stock of piling available for treatment the Railway Company shall have the option of purchasing untreated piles at mutually agreeable prices from the stock of the Creosoting Company, or purchasing treated piles which meet the Railway Company's requirements from the Creosoting Company at its current commercial price.
- E-1 In cases where it is found, on account of unseasoned conditions of material, or other conditions not the responsibility of the Creosoting Company, an unsatisfactory treatment has been obtained and the Railway Company inspector considers it advisable to segregate and re-treat all or any portion of cylinder charge of piles, it shall be done at the following rate for each re-treatment in addition to the prices mentioned in paragraphs D-1 and D-2:  
 (a) Two cents (\$.02) per cubic foot for piling, poles and other similar material retreated. It is understood that entire cylinder charges returned for continuation of treatment without segregation of any part of the material shall not be considered as coming under the provisions of this E-1.

E-2 For storage of treated cross ties after treatment and subsequent loading on cars, in addition to prices A-1, A-2, A-3, per tue \$0.01

E-3 For storage of treated switch ties, stacking lengths separately and subsequent loading in accordance with the Railway Company's instructions for shipment, in addition to prices B-1, B-2, and B-3, per thousand feet board measure \$0.60

E-4 For incising sawed material other than cross ties and switch ties including all handling not included under paragraph C-1, C-2, C-3, necessary to accomplish it, per thousand feet board measure \$0.50

E-5 For other handling at the plant site, framing of timber, etc., as from time to time may be requested in writing by the Railway Company, shall be paid for at actual cost to the Creosoting Company, plus ten (10) per cent to cover supervision and profit.

-----  
XIX. It is understood and agreed that the prices quoted under Section XVIII, paragraphs A-1, A-2, A-3 and B-1, B-2, B-3, cover the unloading from railroad cars or barges, handling to the seasoning yard or to treating trams before treatment, moving them to boring, adzing and incising plant, boring, adzing and incising cross ties and incising switch ties; moving to cylinders, treating them and loading them from trams to railroad cars; and further that prices quoted under paragraphs C-1, C-2, C-3 and D-1, D-2, D-3, cover unloading material from railroad cars or barges and rafts, handling to seasoning yard or to trams, moving to treating cylinders, treating loading from trams on to railroad cars. The prices in Paragraphs A-B-C-D apply to treatment of both air-seasoned and artificially seasoned material.

The "actual treating hours" is considered to be the actual normal time occupied while the ties or other materials are in the cylinders in the process of treatment as shown by the treating records. Delays caused by failure of the Creosoting Company's equipment, low steam pressure, etc., shall be deducted when computing overtime charges.

Where material of the Railway Company is treated in the same charge with commercial material as provided for in Section XVIII, paragraphs C-1 and D-1, the Railway Company's stock of preservatives shall be charged with the calculated quantity required to treat its portion of the mixed load.

XX. The Creosoting Company agrees that, in case it, during the period of this agreement, makes contracts with other railroads directly or through their agents, for the treatment of forest products at prices lower than those scheduled in this agreement, then such lower prices shall become immediately effective in this contract.

XXI. The Railway Company will, on or before the thirtieth day of each month, pay to the Creosoting Company all sums owing to it at the end of the next preceding calendar month, upon proper bills, certified by the Railway Company representative, rendered promptly by the Creosoting Company to the Railway Company.

XXII. This agreement shall be effective as of January 1st, 1937 and shall remain in force for a period of five years, and continue thereafter until cancelled by either party giving one year's written notice to the other party. The effective date of cancellation shall be as of December 31st following the year's notice. The earliest date of the year's notice of cancellation shall be January 1st 1941. It is understood and agreed, however, that any forest products on hand for treatment at the termination of this contract shall be carried to treatment completion under the provisions of this agreement.

XXIII. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF each party hereto has caused this instrument to be signed by its proper official and its corporate seal is hereto affixed and attested by its Secretary, in duplicate, the day and year first above written.

NORTHERN PACIFIC RAILWAY COMPANY  
By \_\_\_\_\_

WEST COAST WOOD PRESERVING COMPANY  
By \_\_\_\_\_



Saint Paul, Minn.,  
September 25, 1936w

MR. BERNARD BLUM:

Referring to your letter yesterday concerning opening up Seattle treating plant. Under the contract we are obligated to treat the equivalent of 3,000,000 cross ties in the ten-year period which expires December 31 next.

The record shows that up to September 1, 1936 we have treated 2,520,811 pcs. of cross ties. The switch ties, lumber, piling and poles bring this equivalent to 2,871,381 ties, leaving a balance to treat to complete the obligation, of 128,619 ties.

There are on hand at Seattle at present in seasoning stock 334,444 pcs. of cross ties. We should therefore open up the plant on November 1 in order to treat the 128,000 ties before the expiration of the contract. Treating capacity is about 60,000 ties per month. In my discussion with Mr. Horrocks on renewal of the contract, he stated that he would treat such ties as might remain in stock after the expiration of the present contract under the terms of the existing contract, even though we did not enter into a new contract relation.

L. YAGER.

cc-Mr. A. J. Loom

Tom

Peramier Tin Plant showed the following  
in regard to West Coast W. P. Co. Contract.

Contract total - Crossties 3,000,000

Tusted to Sept. 1, 1936

Crossties 2,520,811 lbs

Avail ties - equivalent to 189,376 crossties

Misc. - Lumber, pilings, dry poles

equivalent to 161,194 crossties 2,871,381

Remaining to complete (crossties or equivalent) 128,619

HAC

9/25/36

W. A. 9/25



✓  
Overstated to Sept. 1-1936 2,520,811

Switch to ~~power~~ <sup>water</sup> equip 189,376

Miss. lumber ~~for~~ + forest tie equip 161,194 plus.

2,871,381

3,000,000

128,619

~~PART OF GENERAL PLAN~~

# The Atchison, Topeka and Santa Fe Railway System

Railway Exchange, 80 East Jackson Boulevard, Chicago

G. W. HARRIS,  
Chief Engineer System

Chicago, September 24, 1936.

Mr. L. Yager, Asst. Chief Engineer,  
Northern Pacific Railway Co.,  
St. Paul, Minnesota.

Dear Mr. Yager:

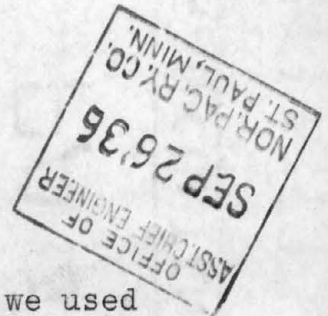
Yours of September 22nd:

Prior to 1931, except during the World War, we used foreign creosote at Somerville and National City. This was delivered by boat to Galveston for the Somerville plant and by boat to San Diego for National City. From 1931 to date, we quit buying foreign oil for use at Somerville and have purchased this requirement from domestic producers on the Atlantic Coast, delivered by boat to Galveston. With the exception of a cargo of domestic creosote delivered by boat to National City in 1933, all of the creosote used at that plant has been imported. On account of subnormal requirements, we did not require any creosote deliveries at National City from 1933 until the spring of 1936 and the requirements furnished this year were foreign oil.

Yours very truly,

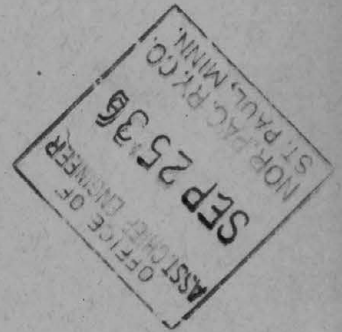
*G. W. Harris*

*add to history file  
NP  
9/26*





Saint Paul, Minn.,  
September 24, 1936



Mr. L. Yager:

In regard to opening the treating plants.

When do you figure it will be necessary to start the  
Seattle plant? We do not want to start sooner than  
necessary although I presume we have our obligation to meet  
under the old contract. Possibly some time in November  
will be all right.

Bernard Blum

September 22, 1936w

Mr. G. W. Harris, Chief Engineer  
A. T. & S. F. Ry. Co.  
Chicago, Illinois

Dear Mr. Harris:

When I was in your office last week we had a discussion about creosote furnished to your treating plants. I understood you to say that the Santa Fe had been using domestic oil delivered by boat either at Galveston or National City. The Northern Pacific and the Milwaukee in the Puget Sound district, as well as the Southern Pacific, have been using foreign oil delivered by vessel and it was our understanding up until recently at least that the Southern Pacific also used foreign oil delivered by vessel at National City and then shipped by rail to the inland plants.

Will you kindly straighten me out on this and advise if and when you changed from the use of foreign to domestic oil?

Yours very truly,

L. YAGER.

Mr. Yager:

This letter signed and  
mailed in your absence.

CBW



September 21, 1936w

Mr. H. E. Horrocks, Manager  
West Coast Wood Preserving Company  
1118 4th Avenue  
Seattle, Washington

Dear Mr. Horrocks:

Your letter of September 16 received,  
and we have made the corrections you have outlined. I  
am therefore attaching copy of revised sheets 1, 6, and 7.

Yours very truly,

L. Yager

Blind Copy -

Mr. A. J. Loom  
Mr. A. J. Hopkins



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

St. Paul Sept 17 1936w

A J Witchel, SP&S

Portland

B-2. Thank you for data received. Y-322

L. Yager



L. J. COLMAN  
PRESIDENT

L. C. HENRY  
VICE - PRESIDENT

A. D. BARRALL  
SECRETARY - TREASURER

H. E. HORROCKS  
MANAGER

# WEST COAST WOOD PRESERVING Co.

CREOSOTED DOUGLAS FIR IN ALL FORMS  
RAIL AND CARGO SHIPMENTS

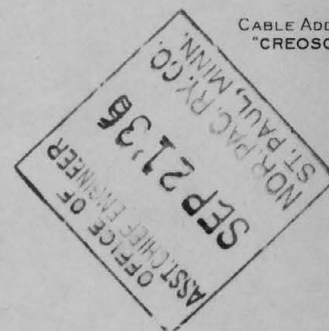
SUCCESSOR TO  
COLMAN CREOSOTING PLANT  
PACIFIC CREOSOTING PLANT

1118 4TH AVE. AT SENECA ST.

SEATTLE, U.S.A.

September 16, 1936

CABLE ADDRESS  
"CREOSOTE"



L. Yager, Assistant Chief Engineer  
Northern Pacific Railway Company  
Saint Paul, Minnesota

Dear Mr. Yager:

We acknowledge yours of the 11th with enclosures concerning renewal of contract for treatment of material at our Seattle plant.

Mr. Barrall and I each read over the draft and find, with exception of minor typographical errors noted in blue on the copy returned herewith, that it is in accord with our understanding when you were in Seattle. There is also one other exception in paragraph 22 where we note you give as the earliest date of the year's notice of cancellation to be January 1, 1940. Since the new contract runs from January 1, 1937 for a period of five years, subject to cancellation on one year's notice, we make the earliest date of notice of cancellation to be January 1, 1941.

We are agreeable to inclusion in the contract of paragraph B-4 as suggested in your letter.

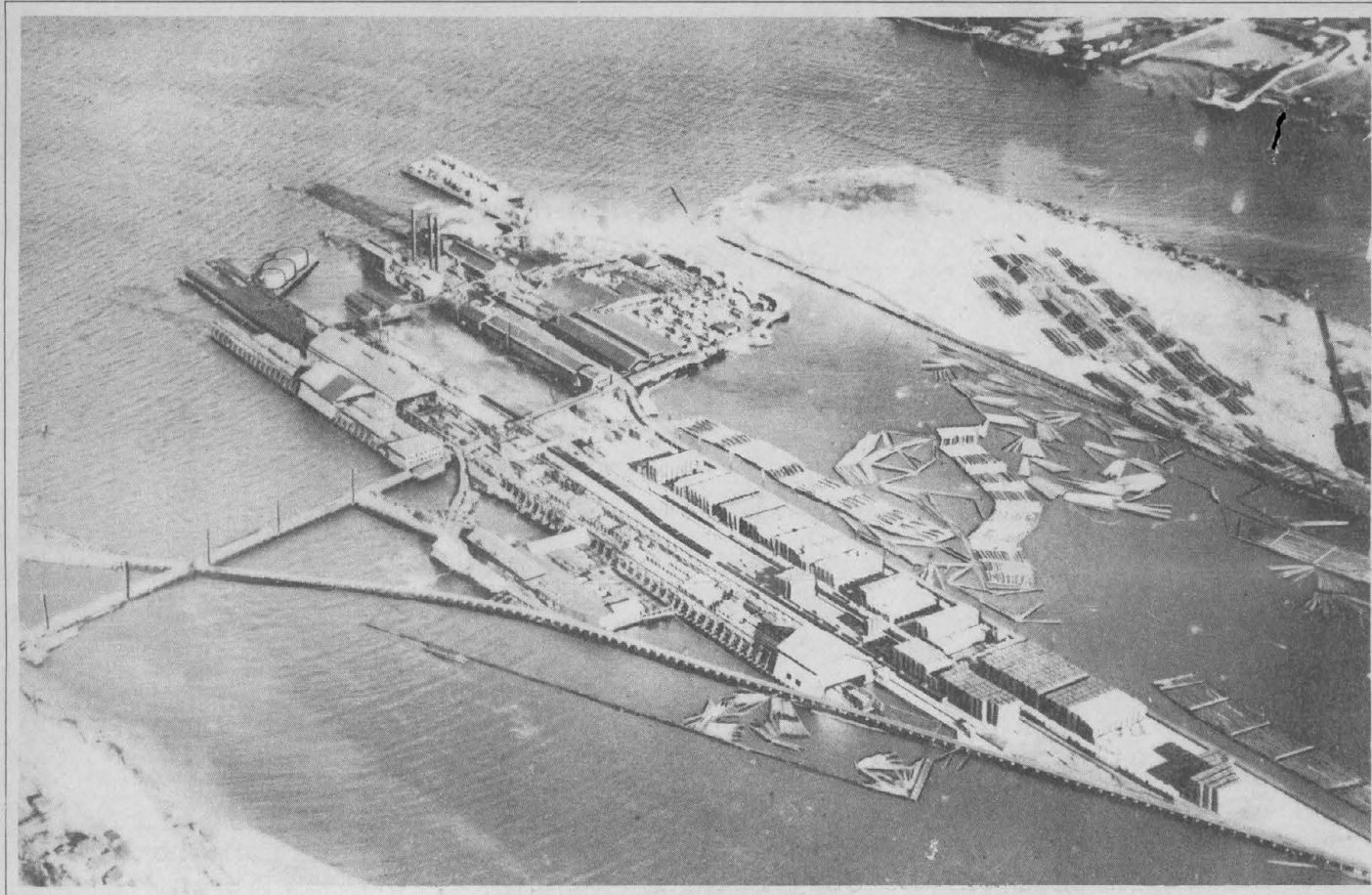
Yours very truly,

WEST COAST WOOD PRESERVING CO.

By

  
Manager

HEH:I  
enc.

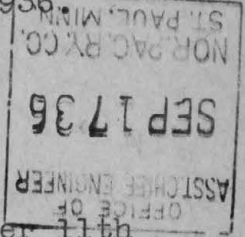


AERIAL VIEW OF MANUFACTURING PLANTS





Brainerd, Minn., Sept. 16, 1936



Mr. L. Yager:

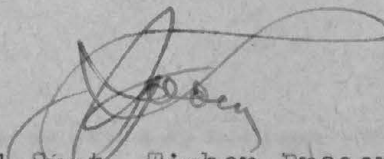
In reply to your letter of September 11th concerning tentative draft of new contract with W.C.W.P. Co.

Under "forest products" in Section 1 it might be well to mention bridge ties in as much as we are suggesting that they be given a definite place in the price schedule. ✓

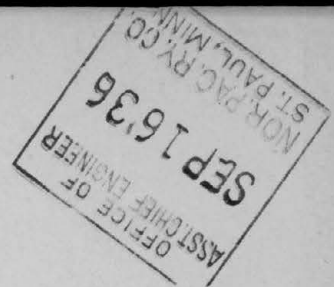
Mr. Hopkins calls attention to a typographical error in Section 1 under clause "A". I believe the word "their" was intended instead of the word "the" to make this read "Their presently owned and individually operated treating plants", as he states. ✓

I agree with the statements made in your letter to Mr. Horrocks and I believe the proposed paragraph "B-4" will in its present form take care of the bridge tie question. I do not look for any serious disagreement from Mr. Horrocks about this or any other part of the draft. ✓

L

  
Gen'l Supt. Timber Preservation.

Paradise, Mont.,  
September 14th, 1936



Mr. L. Yager:

This morning I received your letter of Sept. 11th together with tentative draft of new agreement with the West Coast Wood Preserving Company and letter transmitting same to Mr. Horrocks.

I have gone over the draft closely and have only the following comments to make:

1. Section 1, (a).

The words " in any one or more of the presently owned and individually operated treating plants." I believe here that the word "their" was intended instead of the underlined "the" above. This is very likely a typographical error. ✓

2. "B-4" as given in letter to Mr. Horrocks and covering the treatment of Bridge ties under contract.

Bridge ties may be of two widely different sizes: the 8x8 ties we use on open deck bridges or trestles would be quite comparable to switch ties in handling and treatment and it would seem to me that we could expect to have these treated at the same cost as switch ties. The cost of handling switch ties includes the cost of incising the material and this should be OK for the 8 x 8 ties. Ties for steel bridges however will require different manner of handling, because of their size. They will not be incised in the tie incisor but will be handled through the lumber incisor and will require more handling to bring them to the treating trams. Incising should be paid for separately on these ties. I doubt if Mr. Horrocks will agree to group bridge ties generally in the switch tie group.

The above are the only two suggestions I can make.

*J. C. Hopkins*  
Asst. Gen. Supt. Tim. Pres.

CC-AJL



Portland, Oregon  
September 14, 1936

Mr. L. Yager  
Assistant Chief Engineer  
Northern Pacific Railway Co.  
St. Paul, Minnesota

Dear Sir:

Please refer to your letter of September 5th, 1936,  
about data of S. P. & S. tie treating costs.

All of our ties are seasoned under the boiling under  
vacuum system. The specifications provide for 6 lb. 50/50  
mixture with boring and incising but none as to penetration, the  
average, however, is about from six to eight tenths inches.

We treated at Hillyard <sup>in 1932,</sup> 37925 ties equaling 1,443,563 F. B. M.  
under a contract price of \$9.50 per M. for treatment only, the oil  
and creosote costing \$6.21 per M. additional, a total of \$15.71 per M.  
at Hillyard.

We have had no treated ties since those treated in 1932  
above, until this year.

In 1936 there were treated at Hillyard 28214 ties, equaling  
1,184,988 F. B. M. at a cost of \$8.50 per M. for treatment only, the  
oil and creosote costing an additional \$5.77 per M., a total of  
\$14.27 per M.

In 1936 at St. Helens we had treated 19947 ties, equaling  
775,529 F. B. M. at a total contract price of \$14.30 per M.

Regret the delay in answering your letter but experienced  
some difficulty in obtaining information.

If you wish data before the 1932 records, I believe  
we can find the records and would be glad to let you have the information.

Am sending this air mail with copy by railroad mail.

Very truly yours,

*A. J. Twitchel*  
Assistant Superintendent.

cc-Ry. mail

ST. PAUL, MINN.  
SEP 16 1936  
OFFICE OF  
ASSISTANT CHIEF ENGINEER



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

129 C FD

PORTLAND SEPT 14 1936

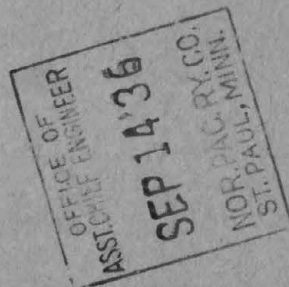
L YAGER

ST PAUL

Y-317 HAVE BEEN A LITTLE DELAYED IN GETTING INFORMATION TOGETHER  
BUT IT WILL GO TO YOU BY AIRMAIL TONIGHT OR IF NOT TOO LENGTHY  
WILL WIRE IT B-2

A J WITCHEL

452 PM







N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

StPaul Sept 14 1936w

A J Witchell

SP&S Ry, Portland Ore.

Did you receive my letter September 5th concerning treating  
costs SP&S ties. Y-317

L Yager

St. Paul, Minnesota, September 12, 1936.

MR. LOUIS YAGER:

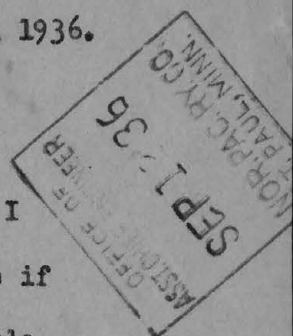
Agreeable to request made verbally yesterday, I hand you herewith statement showing the approximate cost per tie if 200,000 raw ties were hauled over the joint tracks between Seattle and St. Helens, and 200,000 treated ties transported over the same joint tracks between St. Helens and Seattle.

You will understand that the cost is only approximate as I did not attempt to deal with omitted charges and corrections involving the bills of 1935. However, I do not think that if this were done it would make any appreciable difference in the result.

As the statement itself indicates, the cost per tie was arrived at by applying a prorata of the actual expense to the additional business. This obviously results in a higher cost than it actually would be if the bills were restated to include the additional business. It would seem though that a cost of 2¢ a tie is pretty close to being correct.

*W. J. Carter*  
General Accountant

CSC/oc





Statement showing the approximate cost per tie over the joint trackage Seattle to Reservation, Tenino to Vancouver and Bridge Line Vancouver to Willbridge, (Reservation to Tenino omitted for the reason that increased business would not affect the cost to N.P.) to transport 200,000 raw ties Seattle to St. Helens for treatment and 200,000 treated ties St. Helens to Seattle.

Based on figures for the year 1935

	<u>Total expense includ. taxes</u>	<u>Cars or car miles</u>	<u>Cost per car or car mile</u>		<u>Apply cost to 500 cars each way containing 400 ties each</u>	<u>Cost per tie</u>
Seattle to Reservation, 33.33 mi.	\$ 216 650.00	7,689,742 C.M.	2.82¢	for	33,300 C.M. = \$ 939.00	.47¢
Tenino to Vancouver 93 mi.	470 401.00	16,417,054 C.M.	2.87¢	"	93,000 C.M. = 2670.00	1.33¢
Columbia River Bridge	85 780.00	293,988 cars	29.2 ¢	"	400 ties	0.07¢
North Portland to No. End Willamette River Bridge 2.57 mi.	24 968.00	554,143 C.M.	4.51¢	"	2,570 C.M. = 115.90	0.06¢
Willamette River Bridge to Willbridge	27 566.00	214,605 cars	12.85¢	"	400 ties	0.03¢
	<u>Rental</u>					
Columbia River Bridge	177 229.00	293,988 cars	60.28¢	"	400 ties = 0.15¢ less 1/3 =	0.10¢
No. Portland to Willamette 2.57 mi.	77 905.00	554,143 C.M.	14.06¢	"	2,570 C.M. = \$361.34 for 200000 ties less 1/3 =	0.12¢
Willamette to Willbridge	68 298.00	214,605 cars	31.82¢	"	400 ties = 0.08¢ less 1/3 =	0.05¢
					Total cost per tie	2.23¢

Saint Paul, Minn.,

September 11, 1936w

MR. A. J. LOOM:

MR. G. R. HOPKINS:

I am attaching copy of letter to Mr.  
Horrocks, as well as copy of the tentative draft  
mentioned therein, for such comments and suggestions  
as you have to offer.

L. YAGER.



September 11, 1936w

Mr. H. E. Horrocks, Manager  
West Coast Wood Preserving Company  
1118 4th Avenue at Seneca  
Seattle, Washington

Dear Mr. Horrocks:

We have just finished writing up a tentative draft of contract to represent our understanding with respect to the items discussed in the first tentative draft in our last meeting when we were in Seattle. I believe we have covered all of the important items.

We had some discussion about Section XVII with respect to the compensation to the Creosoting Company in the event that the Railway Company should remove its material in seasoning stock, following a fire at the plant. It was the understanding that I was to attempt to write up something which would cover the compensation to the Creosoting Company for the work performed in storing this material prior to the partial destruction. In thinking over the matter, I find this somewhat more difficult than I had originally anticipated, because the Railway Company carries insurance on these ties, which includes the investment in the material and the obligations already incurred to the Creosoting Company. I likewise assume that the Creosoting Company carries insurance protection against such contingencies. The contract obligations with respect to the compensation to the Creosoting Company in such cases is quite clear, and there can be little occasion for predicting any serious complications in the adjustment of this matter. In any event, differences of this sort can be composed by the mechanism set up in the section covering arbitration. If this view should not prove to be satisfactory, then I shall be glad to consult our lawyers and attempt to write up a satisfactory clause in the draft.

After leaving Seattle, we discussed the situation which may possibly arise later on in the event the Northern Pacific adopts the practice of using treated bridge ties. That practice might well account for considerable additional material. This item is not handled the same in the original contract as in the supplement thereto. Large amounts of bridge ties could be handled fully as advantageously as switch ties, whereas small lots would appear to come under the classification of material other than ties. We are therefore suggesting, if agreeable to you, the following paragraph:

Mr. Horrocks...2

Sept. 11, 1936.

"B-4. For treatment of bridge ties in cylinder capacity lots, the conditions and prices of B-1, B-2, and B-3 shall apply. For the treatment of bridge ties in less than cylinder lots, the material should be handled under paragraphs C-1, C-2, and C-3."

I am attaching two copies of tentative draft dated September 2, 1936. You appreciate, of course, that the matter is presented in this form for convenience and certainty of expressing our joint understanding with respect to the proposal, and that no commitment has been or can be made until the entire subject matter is submitted to our people for approval.

Exhibit "A", which would naturally accompany any executed contract, is not attached hereto, because there are not likely to be any important changes therein from the present specifications.

Will you kindly let me have your further comments as early as possible?

Yours very truly,

Blind copy - Mr. A. J. Loom  
Mr. C. R. Hopkins

L. YAGER.



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

MD RO

BRAINERD SEPT 7

L YAGER

CAR 12 ON LINE BILLINGS.

X-35, H-109 ANTICIPATING INCREASED USE OF TREATED BRIDGE TIES  
IT MAY BE ADVISEABLE TO MENTION THEM UNDER SCHEDULE B OF NEW  
TENTATIVE DRAFT IN ANY EVENT THE FEW PIECES THAT MIGHT BE  
INCLUDED IN SUCH SMALL INDIVIDUAL ORDERS OF BRIDGE MATERIAL  
AS NOW BEING SHIPPED TO THE PLANT WOULD NECESSARILY BE TREATED  
UNDER SCHEDULE C. L-175

A J LOOM

520PM

On 2nd Two, R.M.Divn.,  
September 5, 1936w

Mr. A. J. Witchel  
Assistant Superintendent  
S. P; & S. Ry.  
Portland, Oregon

Dear Sir:

I would like to trouble you for some data on the S.P. & S. tie treating costs. It is my recollection that you had some ties treated at St. Helens, and at the Great Northern contract plant at Hillyard. I assume that these were all treated green, and that they were 50/50 mixture treatment.

I would like to know the approximate amounts treated by years for the last four or five years, what the contract prices were for treatment per thousand feet board measure, and what were the specifications as to penetration and preservative retention per cubic foot.

Will you kindly write me, sending by air mail letter?

Yours very truly,

L. YAGER.





N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

LY:

Mr. Loom went on through to Brainerd yesterday, not stopping off here as he had planned. I am sending copy of your wire and my answers to him today.

GRH

9-4-36

Paradise, Mont.,  
Sept. 4th, 1936

Mr. L. Yager:

Referring to your wire x-35 from Pasco concerning the treatment and payment for treating of Bridge Ties under the original and supplementary contracts with the Seattle plant:

The original contract did include Bridge Ties with switch ties and other dimension lumber and the payment for this material was paid for under Schedule B. We began the contract at Seattle with a large stock of material in the Seasoning Yard and this at times included considerable Bridge Tie material. Our attempt at that time was to cover the payment of Bridge Ties by Schedule B-1 and as I remember it we did succeed in doing that generally. However, checking of Bridge Tie material and lumber ~~was~~ during the air seasoning was so important that we discontinued the treatment of air seasoned material of this kind. Other influences also caused us in part to discontinue air seasoning of lumber, but the most important item in the service life of the treated material was the checking developed during air drying. After a few years, all treatment of air dry bridge timber and piling was discontinued entirely.

Actually, under the Supplementary Contract we have treated very little, if any Bridge Ties. The payment for treatment of this material would come under Schedule C-1 and C-2 at this time. Generally, and there were only a few exceptions to this, Bridge Ties were treated in mixed charges of lumber and other bridge material, so that the manner of payment for the treating done on this material has been correct, in my opinion, at all times.

When the Supplementary Contract was being drawn up, it was decided that switch ties should be separated from the lumber class and be paid for on a cross tie basis, and we succeeded in lowering this base price from \$9.00 per M to \$8.00 per M, putting Switch tie charges in a bracket by themselves. This is correct, I believe.

The Supplementary Contract makes no mention of Bridge Ties, but it was the intent at the time this was drawn up to include these charges in those for lumber, this being indicated in the correspondence at the time (See letter of IS dated Feb. 19th, 1932 to BB analysing the old contract, Page No. 3).

I believe we should mention Bridge Ties along with lumber in our new set-up, including them in the same price schedules.

*J. L. Hopkins*  
Asst. Gen. Supt. Tim. Pres.

CC-AJL



Paradise, Sept. 4th, 1936

Mr. L. Yager:

In answer to your wire of Sept. 3rd, X-34, asking about statement of car loads of Commercial material shipments from Seattle plant, I am sending you the following, which is copy of my letter of August 17th, to Mr. Loom:

"Referring to Mr. Schaefer's report on carload shipments of treated material to and from the West Coast Wood Pres. Co.'s plant at Seattle, as given on notation by Asst. Chief Engineer under date of August 4th, and your request to me for comments:

I have today gone over the Plant records from the first of the year 1935 to date and have found the following:

	<u>NP</u>	<u>UP</u>	<u>GN</u>	<u>Mil.</u>	<u>Total</u>
<u>Year 1935</u>					
Transcontinental	46	26	13	17	102
Short haul	<u>38</u>	<u>4</u>	<u>21</u>	<u>12</u>	<u>75</u>
Totals	<u>84</u>	<u>30</u>	<u>34</u>	<u>29</u>	<u>177</u>
<u>Year 1936</u>					
<u>First 6 Months</u>					
Transcontinental	29	10	8	5	52
Short Haul	<u>67</u>	<u>10</u>	<u>34</u>	<u>10</u>	<u>121</u>
Totals	<u>96</u>	<u>20</u>	<u>42</u>	<u>15</u>	<u>173</u>
<u>Year 1936</u>					
<u>7-1 to Aug. 17</u>					
Transcontinental	8	6	5	1	20
Short haul	<u>25</u>	<u>5</u>	<u>15</u>	<u>-</u>	<u>45</u>
Totals	<u>33</u>	<u>11</u>	<u>20</u>	<u>1</u>	<u>65</u>
<u>GRAND TOTALS</u>					
Transcontinental	83	42	26	23	174
Short Haul	<u>130</u>	<u>19</u>	<u>70</u>	<u>22</u>	<u>241</u>
Totals	<u>213</u>	<u>61</u>	<u>96</u>	<u>46</u>	<u>415</u>
Percentages	51.3%	14.6%	23.1%	11.0%	100.0%

This information is taken direct from the Plant Billings."

Short haul was considered as being west of Butte and Transcontinental east of Butte.

*E. R. Hopkins*  
Asst. Gen. Supt. Tim. Pres.



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

Paradise, Sept. 4, 36

L. Yager

~~Missoula~~ Spokane Pasco

Your x-35 to A.J. Ipom Seasoned bridge ties were treated the first two or three years ~~by treatment~~ and was paid for under Schedule B-1 Stop Treatment of seasoned bridge ties was stopped because of the heavy checking and all such material has since been treated under schedule B-2 of original contract and would be covered by schedule G-1 and G-2 of the the supplementary contract at this time Stop. we have not treated any bridge ties ~~under the~~ under the supplementary contract.

G R Hopkins





N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

8PDH

PARADISE SEPT 4 1936

L YAGER

SPOKANE

YOUR X-35 TO A J LOOM SEASONED BRIDGE TIES WERE TREATED  
THE FIRST TWO OR THREE YEARS AND WAS PAID FOR UNDER SCHEDULE  
B-1 STOP TREATMENT OF SEASONED BRIDGE TIES WAS STOPPED BECAUSE  
OF THE HEAVY CHECKING AND ALL SUCH MATERIAL HAS SINCE BEEN  
TREATED UNDER SCHEDULE B-2 OF ORIGINAL CONTRACT AND WOULD  
BE COVERED BY SCHEDULE C-1 AND C-2 OF THE SUPPLEMENTARY  
CONTRACT AT THIS TIME STOP WE HAVE NOT TREATED AND BRIDGE  
TIES UNDER THE SUPPLEMENTARY CONTRACT H-109

GRHOPKINS

211P



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

Pasco Sept 4 3, 1936w

A J Loom

Paradise

Original Colman contract under schedule of prices B-1 included bridge ties with switch ties dimension timber and lumber stop supplementary contract February 1933 makes no mention of bridge ties stop have we had treatment of bridge ties and if so under what classification was treatment paid for X-35

L Yager





N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

Pasco Sept 3 1936w

G R Hopkins

Paradise

Do not remember you giving me your pencil statement showing car loads  
commercial shipments from Seattle treating plant please send to me  
care supt Missoula X-34

L Yager

ESTIMATED COST OF TREATED TIE TREATED UNDER CONTRACT AT SEATTLE  
AND DELIVERED TO THE DIVISIONS. BASED ON 300,000 TIES PER YEAR  
(EQUIVALENT 2"x8"- 8').

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green tie 37-1/3 FEM at \$12.	\$ .4480
2. Sales tax at 2% on 75%	.0067
3. Cost of contract treatment	.2600
4. Cost of creosote 1.35 gallons at \$.1326	.1790
5. Cost of petroleum 1.65 gallons at \$.021	.0347
6. Treating supervision, \$2400	.0080
Sub Total	<u>\$ .9364</u>

(B) INTEREST AND TAXES:

1. Interest on preservatives, \$52,650 at 6% for 6 mos. \$1579.50	\$ .0054
2. Taxes on preservatives \$26,325 at 32% x .0355	.0010
3. Taxes on seasoning ties \$.4547 at 32% x .0355	.0052
4. Interest on seasoning ties \$.4547 at 6% - 12 mos.	.0273
	<u>\$ .0389</u>

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on grees ties, average haul 148 miles, 125# at \$.003	\$ .0278
2. Haul treated tie average haul 100 miles, 130# at \$.00225	.0146
Sub total	<u>\$ .0424</u>

SUMMARY:

A. Direct costs	\$ .9364
B. Interest and Taxes	.0389
C. Indirect items, Freight, etc.	.0424
Totals	<u>\$1.0177</u>



\* ESTIMATED COST OF TREATING INLAND EMPIRE TIES AT PARADISE  
AND SHIPPING TO SEATTLE PLANT TERRITORY. BASED ON 300,000  
TIES PER YEAR. (EQUIVALENT 7x8 - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green ties 37-1/3 FEM at \$13.	\$ .4850
2. Cost of treatment (direct items)	.3498
3. Cost of treatment (indirect tax)	.0037
4. Cost of treatment (indirect overhead etc.)	.0236
Sub Total	\$ .8621
Interest and depreciation on investment (\$.0220)	

(B) INTEREST AND TAXES:

1. Interest on seasoning ties, \$.485 at 6% - 12 months	\$ .0291
2. Taxes on seasoning ties \$.485 at 1.63%	.0079
Sub Total	\$ .0370

(C) INDIRECT ITEMS, FREIGHT ETC:

1. Haul on green ties, average haul 146 miles, 125# at \$.003	\$ .0274
2. Haul on treated ties, average haul 662 miles, 130 # at \$.0015	.0645
Sub Total	\$ .0919

SUMMARY:

A. Direct Cost	\$ .8621
B. Interest and Taxes	.0370
C. Indirect Items, Freight, Etc.	.0919
Total	\$ .9910

At Seattle, Wash.  
August 30, 1936w

Statement #3

ESTIMATED COST OF TREATING COAST FIR TIES AT PARADISE AND SHIPPING  
BACK TO SEATTLE PLANT TERRITORY. BASED ON 300,000 TIES PER YEAR.  
(EQUIVALENT 7x8 - 8')

(A) DIRECT COST OF TIES AND TREATMENT:

1. Cost of green ties 37-1/3 FBM at \$12.	\$.4480
2. Sales tax does not apply	-
3. Cost of treatment (direct items)	.3498
4. Cost of treatment (indirect tax)	.0037
5. Cost of treatment (indirect overhead etc.)	.0236
Sub Total	<u>\$.8251</u>
Interest and depreciation on investment (\$.0220)	

(B) INTEREST AND TAXES:

1. Interest on seasoning ties	
\$.448 at 6% - 12 months	\$.0269
2. Taxes on seasoning ties	
\$.448 at 1.63%	.0073
Sub Total	<u>\$.0342</u>

(C) INDIRECT ITEMS, FREIGHT, ETC.:

1. Haul on green ties, average haul 688 miles,	
125# at \$.003	\$.1290
2. Haul on treated ties, average haul 662 miles,	
130# at \$.0015	.0645
Sub Total	<u>\$.1935</u>

SUMMARY:

A. Direct costs	\$.8251
B. Interest and taxes	.0342
C. Indirect items, freight, etc.	.1935
Total	<u>\$1.0528</u>

At Seattle, Wash.  
August 30, 1936w



ESTIMATED COST OF TREATING TIES, NORMAL PROGRAM, AT PARADISE,  
BASED ON 450,000 TIES PER YEAR. (EQUIVALENT 7x8 - 8')

(A) DIRECTLY ASSIGNABLE ITEMS:

1. Creosote, 1.35 gal. at \$.128 plus company freight \$.008	\$.1836
2. Petroleum 1.65 gal. at \$.021 plus freight at \$.0279	.0460
3. Unloading and cross piling	.0200
4. Loading for transfer to machines	.0140
5. Handling through machines	.0180
6. Loading for shipment	.0120
7. Fuel, coal at \$1.10 per ton, plus company freight at \$.0015	.0110
8. Plant labor (operation and repairs) \$15172.04	.0337
9. Supervision (local) \$ 3801.90	.0084
10. Supervision (general) \$ 5144.76	.0112
11. Material and supplies	.0049
Sub Total	<u>\$.3628</u>

(B) INDIRECT OVERHEAD ETC.:

1. Interest on investment, \$185,534 at 6% (\$11,132.04)	\$.0247
2. Depreciation on plant \$179,354 at 3% (\$5,380.62)	.0120
3. Taxes on plant, year 1935 - \$280.73	.0006
4. Insurance on plant, 1935 premium \$147.57	.0003
5. Interest on preservatives \$90450 at 6% for 1 mo. (\$452.25)	.0010
6. Taxes on preservatives (included in (3))	-
7. Insurance on preservatives (incl. in (4))	-
Sub Total	<u>\$.0386</u>

(C) INDIRECT TAXES:

1. Federal Retirement Act, 3-1/2% of Payroll (\$.1173)	\$.0041
---	---------

SUMMARY:

A. Directly assignable items	\$.3628
B. Indirect overhead etc.	.0386
C. Indirect taxes	.0041
Total Cost	<u>\$.4055</u>

At Seattle, Wash.  
August 30, 1936w

ESTIMATED COST OF TREATING TIES, NORMAL PROGRAM OF 450,000 TIES  
PLUS 300,000 SEATTLE TIES AT PARADISE, TOTAL 750,000 TIES.  
(EQUIVALENT 7" x 8" - 8')

(A) DIRECTLY ASSIGNABLE ITEMS:

1. Creosote 1.35 gal. at \$.128 plus Co. frt. \$.008	\$.1836
2. Petroleum 1.65 gal. at \$.021 plus frt. at \$.0279	.0460
3. Unloading and cross piling	.0200
4. Loading for transfer to machines	.0140
5. Handling through machines	.0180
6. Loading for shipment	.0120
7. Fuel, coal at \$1.10 per ton plus Co. Frt. \$.0015	.0110
8. Plant labor (operation and repair) \$21,110.64	.0281
9. Supervision (local) \$ 3,961.05	.0053
10. Supervision (general) \$ 5,144.76	.0069
11. Material and supplies	.0049
Sub total	<u>\$.3498</u>

(B) INDIRECT OVERHEAD ETC.:

1. Interest on investment \$185,534 at 6% (\$11,132.04)	\$.0148
2. Depreciation on plant \$179,354 at 3% (\$5380.62)	.0072
3. Taxes on plant, year 1935 - \$280.73	.0004
4. Insurance on plant, 1935 premium \$147.57)	.0002
5. Interest on preservatives \$90450 at 6%	.0010
6. Taxes on preservatives - included in (3)	-
7. Insurance on preservatives - included in (4)	-
Sub total	<u>\$.0236</u>

(C) INDIRECT TAXES:

1. Federal Retirement Act, 3-1/2% of payroll (\$.1043)	\$.0037
--	---------

SUMMARY:

A. Directly assignable items	\$.3498
B. Indirect overhead, etc.	.0236
C. Indirect Tax	.0037
Total Cost	<u>\$.3771</u>

At Seattle, Wash.  
August 30, 1936w



ESTIMATED SEGREGATION OF COSTS TO CONTRACTOR ON TREATING MATERIAL AT SEATTLE PLANT, FOR CROSS TIES ONLY. BASED ON AVERAGE OF 300,000 PGS. 7x8x8 TIE EQUIVALENTS PER YEAR.

Contract Price \$6.50 per M. for 12 hr. treatment is equivalent to \$.243 per tie (7x8-8').

Actual price paid contractor for treatment of all cross ties to August 1, 1936 was \$.2600 per tie covering all additional charges for over time.

(A) DIRECTLY ASSIGNABLE COSTS:

1. Unloading and stacking green ties	\$ .01125
2. Removing seasoned ties to conveyer	.00250
3. Conveyer work	.00250
4. Boring, adzing, incising and charging retorts	.00900
5. Loading out treated ties for shipment	.00625
6. Fuel - steam power	.02000
7. Plant labor - operation and repairs	.02100
8. Material and supplies	.01000
Sub Total	<u>\$ .08250</u>

(B) DIRECTLY ASSIGNABLE TAXES:

1. State Industrial Tax and Workmans Compensation, \$.0215 per hour	\$ .0017
2. Federal Social Security Tact, 2.1% of Labor	.0011
3. Business & Occupational Tax, 1/4% on Gross business	.0008
Sub Total	<u>\$ .0036</u>

(C) OVERHEAD, ETC.:

1. General and plant supervision	\$ .0120
2. Amortization of plant, \$300,000 in 10 yrs.	.1000
3. Interest on investment \$300,000 at 6%	.0330
4. Taxes on plant	.0120
5. Insurance on plant	.0010
Sub total	<u>\$ .1580</u>

SUMMARY:

A. Direct Assignable Costs	\$ .0825
B. Directly Assignable Taxes	.0036
C. Overhead, etc.	.1585
Total	<u>\$ .2446</u>
Payments received	.2600
Profit	<u>\$ .0154</u>
Profit % of cost	6.13%

Seattle, Wash.  
August 30, 1936w

COMPARATIVE CREOSOTE AND PETROLEUM PRICES BASED ON QUOTATIONS  
CURRENT FOR YEAR 1936.

(A) COSTS DELIVERED AT PARADISE:

1. Lehigh, 20% at \$.11-1/2	\$.0230
2. Domestic, 80% at \$.13-1/8	<u>.1050</u>
3. Average cost per gal.	.1280
4. Company freight, St. Paul, at \$.0015, = \$.0088 at 80 %	.0070
5. Company freight, Lehigh, at \$.0015, = \$.0051 at 20%	<u>.0010</u>
6. Total cost, average company freight	.0080
7. Total cost including Co. frt. (3) plus (6)	<u>.1360</u>

(B) COST DELIVERED AT SEATTLE:

1. Foreign oil at \$.13	.1300
2. Washington sales tax at 2%	<u>.0026</u>
3. Total cost delivered	.1326

(C) PETROLEUM AT PARADISE:

1. Cost of oil at \$.021	.0210
2. Company freight 7.87#, 584 mi. at \$.003	<u>.0069</u>
3. Total cost	.0279

At Seattle, Wash.  
August 30, 1936w



STATEMENT OF MATERIAL TREATED UNDER CONTRACT AT SEATTLE

Year	No. Ties	Ties F.B.M.	Per Cent	Switch F.B.M.	Tie %	Piling & Timber F.B.M.	%	Total F.B.M.
1927	176,045	6,572,346	73.2	595,602	6.6	1,805,958	20.2	8,973,906
1928	468,231	17,480,622	88.1	1,063,188	5.4	1,303,680	6.5	19,847,490
1929	405,893	15,153,337	89.4	1,262,814	7.4	533,988	3.2	16,950,139
1930	262,784	9,810,602	93.9			637,434	6.1	10,448,036
1931	223,030	8,326,453	83.1	1,240,848	12.4	458,094	4.5	10,025,395
1932	244,255	9,118,853	88.7	719,964	7.0	438,816	4.3	10,277,633
1933	102,963	3,843,952	80.6	560,868	11.8	366,786	7.6	4,771,606
1934	246,455	9,200,986	91.2	653,100	6.5	240,072	2.4	10,094,158
1935	112,276	4,191,637	79.4	617,064	11.7	469,812	8.9	5,278,513
1936*	276,582	10,325,727	84.2	1,448,034	11.8	484,764	4.0	12,258,525
Total	2,518,514	94,024,515	86.3	8,161,482	7.5	6,739,404	6.2	108,925,401
1936	340,000	12,693,322		500,000				13,193,322
Totals	2,858,514	106,717,837		8,661,482				122,118,723

\*Includes up to August 1, 1936.

Seattle, Wash.  
August 30, 1936w

COMPARISONS OF UNIT PRICES FOR TREATING CROSS TIES, SWITCH TIES, TIMBER, ETC. AS BETWEEN THE NORTHERN PACIFIC CONTRACT WITH WEST COAST WOOD PRESERVING COMPANY AT SEATTLE, AND THE GREAT NORTHERN CONTRACTS AT HILLYARD.

	N.P.Cont. Jan 1, 1927	G. N. Cont. June 1, 1936	G.N.Cont June 1926
1. Cross ties, Douglas or Inland Fir, Ft. B.M.	\$6.50	\$8.96	\$8.33
2. Cross ties, Douglas Fir, equivalent 7x8-8'	.2407	.3319	.3085
3. Cross Ties, Tamarack or Larch, FBM	6.50	7.92	8.33
4. Cross Ties, Tamarack or Larch, pr. Tie	.2407	.2933	.3085
5. Cross ties, Lodge pole or Ponderosa Pine, Ft. EM	6.50	7.50	8.33
6. Cross Ties, Lodge pole or Ponderosa Pine, per tie	.2407	.2777	.3085
7. Switch ties, Fir & Larch, Ft. EM	8.00	12.00	12.00
8. Switch ties, Pine, ft. EM	-	10.00	12.00
9. Bridge timber lumber, Fir & Larch, FBM	10.45	12.00	12.00
10. Bridge Timber Lumber, Pine FBM	-	10.00	12.00
11. Piling, Fir & Larch, per cu.ft.	.14	.15	-
12. Piling, cedar, per cu. ft.	-	.14	-
13. Piling, pine, per cu.ft.	-	.13	-
14. Cross ties, green, ft. EM (fir)	7.52	10.62	-
15. Cross ties, green, per tie (fir)	.2785	.3933	-
16. Switch ties, green, FBM (fir)	9.02	13.66	-
17. Bridge timber lumber, green, FBM (fir)	11.47	13.66	-
18. Bridge timber lumber, green (usual lots fir) FBM	11.72	13.66	-
19. Bridge timber lumber, green, (small lots fir) FBM	13.05	13.66	-
20. Piling, green fir, per cu..ft.	.2012	.17	-

Note: Item (18) based on 30,000 FBM or over.

Item (19) based on charges less than 30,000 FBM.

Item (20) based on treating green piling requiring a total cylinder time of 42 hours.

The copy of G.N. June 1926 contract is not complete as to schedule of prices.

Note: G. N. June 1, 1936 contract provides that contractor shall pay to the G. N. rental for plant of \$50,000 per year in case G. N. offers for treatment 1,750,000 cu.ft. or 21,000,000 FBM. This equal to 561,736 cross ties 7x8-8'. The rental therefore is equal to about 9 cents per tie. The G. N. guarantees to offer for treatment 1,500,000 cu.ft. per year. In the event less than 1,750,000 cu.ft. is offered the rental drops to \$35,000 per year. A rental of \$35,000 applied to 1,500,000 cu.ft. of cross ties is equal to 482,312 pcs. 7x8-8' ties or 7.2 cents per tie.



Statement #9, sheet 2.

The Great Northern contract provides that the G. N. shall, in addition, assume the cost to the contractor of all taxes, contributions, or assessments imposed by Federal Social Security Act, or any similar acts in the State of Washington, etc.

The N. P. Seattle contractor has an investment of about \$300,000 in treating plant and seasoning yard. The depreciation charge based on ten year period is ten cents per tie.

Seattle, Wash.  
August 30, 1936w

At Seattle, Wash.,  
August 27, 1936w

MR. A. J. LOOM  
c/o A. F. Stotler.

Referring to the figures which you made up covering cost to the Northern Pacific for treating ties and likewise similar costs to the West Coast Wood Preserving Company.

It has just occurred to me that these statements in both instances are not complete for over-all costs because they do not take into consideration costs of the Federal Social Security Act, or the Unemployment Compensation Act of the State of Washington, and likewise, to the Northern Pacific contribution to the Pension Retirement Fund. There may be other similar items which we have not taken into consideration. I suggest that you might well spend a half-day with Mr. Wales in Tacoma, and get posted up on these items so that we can handle them properly.

I am also enclosing blueprint copy of the Great Northern contract dated June 1, 1936 with the National Pole and Treating Company for treatment of material at Hillyard. I think you should become familiar with this before we talk to Mr. Horrocks.

L. YAGER.





N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

Seattle Aug 27 1936w

A J Loom, Care Condr Train ~~Three~~ *One*

Idaho Division

Will be in Portland Friday back in Seattle Saturday stop

We will get our data together in proper shape Saturday stop

When you arrive wish you would ~~arrange~~ make appointment with

Mr. Horrocks to meet us next Monday X-272

L. Yager



N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

Seattle Aug 25 1936w

A J Loom

Brainerd Minn

Wish you would arrange to be Thursday or Friday with tie data X-251

L Yager



GREAT NORTHERN RAILWAY COMPANY

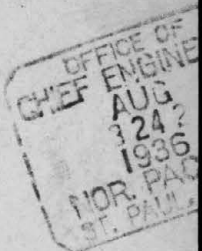
OFFICE OF THE CHIEF ENGINEER

J. R. W. DAVIS,  
CHIEF ENGINEER

ST. PAUL, MINN.

August 22, 1936

K-2667



Mr. Bernard Blum  
Chief Engineer  
Northern Pacific Railway Co.  
St. Paul, Minnesota

Dear Sir:

Referring to your telephone conversation of  
the other day:

I am sorry that we do not have an additional  
typewritten copy of the contract recently entered into  
covering the treatment of our ties at Hillyard, but I  
have had a blue print made which I am attaching and  
which I hope will give you the information wanted.

Yours truly

A handwritten signature in dark ink, appearing to read "J. R. W. Davis". To the right of the signature is a small capital letter "B".

Chief Engineer

wegb rh

A handwritten signature in dark ink, appearing to read "L. G. B.". To the right of the signature is the date "8/24".



AGREEMENT, made this 1st day of June, 1936,  
between NATIONAL POLE & TREATING CO., a corporation, hereinafter  
called the "Contractor", and GREAT NORTHERN RAILWAY COMPANY, a  
corporation, hereinafter called the "Railroad Company",

## WITNESSETH:

For and in consideration of the mutual covenants and  
agreements of each party hereinafter contained, the Railroad Com-  
pany and the Contractor hereby covenant and agree as follows:

1. The Railroad Company hereby leases to the Contractor  
for a term equal to the period of this agreement the premises lo-  
cated at Hillyard, Washington, shown outlined in red upon the plan  
which is attached hereto and made a part hereof, marked "Exhibit A",  
together with the timber treating plant thereon and the equipment  
and facilities thereof, except the portion of said plant, equip-  
ment and facilities owned by others than the Railroad Company.

Subject to the provision of the last paragraph of section  
4 hereof, the Contractor shall pay to the Railroad Company as rental  
for said premises, plant, equipment and facilities, the sum of Fifty  
Thousand Dollars (\$50,000.00) for each and every year this agreement  
shall remain in effect, payable in equal monthly installments in  
advance on the first day of each and every month of the term hereof  
at the office of the Railroad Company in the City of St. Paul,  
Minnesota.

2. All trackage, buildings, structures, equipment and  
other improvements placed or erected upon the leased property by  
the Contractor shall remain the property of the Contractor. In  
case the Contractor shall at any time acquire by purchase or other-  
wise from anyone having the right to dispose of the same any track-  
age, buildings, structures, equipment or other improvements now or  
hereafter being upon the leased premises, such property shall like-  
wise remain the property of the Contractor.



The plant, equipment, trackage and facilities owned by the Railroad Company and located upon the leased property May 1, 1937, shall be delivered to the Contractor in proper operating condition and in a good state of repair and the Contractor shall maintain said plant, equipment, trackage and facilities in proper operating condition and in a good state of repair during the period of this agreement and shall so surrender same to the Railroad Company upon the termination hereof, reasonable wear excepted.

3. The words "timber" or "timbers" as employed in this agreement shall mean cross ties, switch ties, bridge ties, bridge timbers, lumber, car material, piling, poles and posts.

4. The Contractor undertakes to treat for the Railroad Company at said plant during each year that this agreement is in effect all timbers that the Railroad Company may desire treated at said plant in such year but not less than 1,750,000 cubic feet and subject to said minimum of 1,750,000 cubic feet not more than the number of cubic feet that the maximum capacity of the plant in such year exceeds the plant capacity required by the Contractor in such year for treatment of timber at such plant for persons or corporations other than the Railroad Company under contract between the Contractor and such persons or corporations.

The Railroad Company guarantees that it will furnish to the Contractor for treatment at said plant sufficient timber so that not less than 1,500,000 cubic feet of timber may be treated by the Contractor for the Railroad Company at said plant in each year of the term hereof.

In the event that the Railroad Company shall have treated by the Contractor less than 1,750,000 cubic feet of timber in any



year of the term hereof the rental reserved to the Railroad Company pursuant to section 1 hereof shall be reduced for such year to the sum of Thirty-five thousand dollars (\$35,000.00) and the Railroad Company at the end of each such year shall refund to the Contractor all sums paid by it as rental for such year in excess of Thirty-five thousand dollars (\$35,000.00).

5. The Railroad Company shall deliver timbers to be treated for it by the Contractor under this agreement f.o.b. cars at said plant, and after the said timbers have been treated the Contractor shall redeliver the said timbers to the Railroad Company on cars to be furnished and placed at the plant by the Railroad Company for this purpose. The work of unloading and loading said timbers from or on cars shall be performed by the Contractor.

6. The Railroad Company agrees to deliver timbers to be treated for it by the Contractor under this agreement in such quantities and at such intervals as will enable the Contractor to season sufficiently and treat the Railroad Company's requirements in each year. The Contractor shall provide facilities and labor sufficient to unload ten cars of timber per day, exclusive of Sundays and holidays, should that number be offered by the Railroad Company. The Railroad Company agrees not to deliver to the Contractor in any one day for treatment for the account of the Railroad Company more than ten carloads of timber. If on any one day it does deliver more than ten carloads, the Railroad Company shall assume and pay demurrage charges accruing in respect to cars in excess of ten cars so delivered in one day. The Contractor shall pay demurrage charges at tariff rates on any cars delivered by the Railroad Company in one day not in excess of ten cars.

7. The Railroad Company agrees that in loading timbers for delivery to the Contractor for treatment, it will group the kinds, sizes and lengths of timber in accordance with the manner in which it wishes its timbers stored and treated.



8. The Railroad Company at its own cost and expense shall do all switching of cars to and from said plant necessary in connection with the treatment of its timber and shall supply sufficient cars to remove all timbers treated under the terms of this agreement for the Railroad Company as and when said timber is ready to be shipped, provided that the Contractor shall give orders for such cars to the Railroad Company at least five days prior to the treatment of such timber. All switching within the limits of said plant necessary in connection with the handling and treatment of timber shall be done by the Contractor at its own expense.

9. The Railroad Company shall supply all strips, riding blocks, space blocks, stakes, wire and other materials necessary in loading the timbers for safe shipment, or in case such materials may be supplied by the Contractor at the request of the Railroad Company the Railroad Company will pay the Contractor the actual cost thereof. All such materials removed from incoming cars of the Railroad Company shall be carefully stored free of charge by the Contractor and used in loading out shipments.

10. The Contractor shall store all timbers shipped to it by the Railroad Company, to be treated under this contract, until said timbers are properly air seasoned and ready for treatment, and until said timbers are actually treated, and shall make no charge for such storage except any charges which may be authorized for rehandling under the provisions of section 17 of this agreement. The different species of wood, such as fir, larch and pine, shall be piled separately in the tie yard for seasoning and shall be treated separately. The Contractor shall stack the ties of the Railroad Company in such manner as the Railroad Company may designate on treated or non-decaying sills and shall keep the space under and between the stacks at all times clear of weeds, long grass, rotting wood or other rubbish, and shall drain the yard so that no water can stand under the stacks or in their vicinity.



11. The Contractor agrees that in unloading and storing in the yard at the plant the timbers delivered to it by the Railroad Company, each stack shall have painted upon it the initial, number and out-turn of each car from which the timbers are unloaded, also date of unloading.

12. The Railroad Company may require the Contractor to pre-frame before treatment bridge timbers, car material and lumber. For this service the Contractor shall charge the Railroad Company its actual cost plus ten per cent.

13. The Railroad will supply the Contractor with the preservatives to be used in treating its timbers f.o.b. cars at the plant and the Contractor shall treat the said timbers in accordance with the standard specifications of the American Railway Engineering Association in effect at the date of this agreement. Timbers shall be treated with the preservatives and to the point of retention per cubic foot and with solutions of strength as follows:

<u>MATERIAL</u>	<u>PRESERVATIVE</u>	<u>RETENTION PER CUBIC FOOT</u>	<u>STRENGTH OF SOLUTION</u>
Cross Ties	Zinc Chloride	.55 lb. minimum	3%
Cross Ties	Zinc Meta-Arsenate	1/6 lb. minimum	1.70%+
Cross Ties	Creosote-Petroleum	7 lb. minimum	50-50 Mix.
Bridge Ties	Creosote-Petroleum	8 lbs.	50-50 Mix.
Bridge Timbers	Creosote-Petroleum	8 lbs.	50-50 Mix.
Switch Ties	Creosote-Petroleum	8 lbs.	50-50 Mix.
Piling (land)	Straight Creosote	10 lbs.	100%
Piling (marine)	Straight Creosote	To refusal	100%
Poles and Posts	Creosote-Petroleum	9 lbs.	50-50 Mix.
Car Material	Creosote-Petroleum	8 lbs.	50-50 Mix.
Lumber	Creosote-Petroleum	8 lbs.	50-50 Mix.

Cross ties shall be treated with zinc chloride, zinc meta arsenate or creosote-petroleum as the Railroad Company shall determine.



14. The Contractor agrees that the stacking of timbers in its storage yard for air seasoning shall be subject to the supervision of a representative of the Railroad Company, and said representative may inspect at the said plant all timber before and after treatment. Said representative shall have full access at all times to all information and details in connection with the treatment of timbers for the Railroad Company and shall determine when timbers have been properly seasoned. The process of treating and the quantity of preservative used in connection therewith shall be subject to the inspection and supervision of such representative; and he shall be permitted to examine and test all solutions and ingredients received at the plant of the Contractor to be used in the treatment of timbers for the Railroad Company, or he may request the Contractor to make the chemical analysis of the preservatives under his supervision. The apparatus and chemicals necessary for making the analyses and tests required by the Railroad Company shall be provided by the Contractor and kept in condition for use at all times.

15. The Contractor shall count and tally timbers received in each car immediately after receipt of car at the plant, either before or immediately after unloading, against invoices or inspection reports furnished by the Railroad Company, and shall mail reports of such tally to the Railroad Company immediately after each invoice or inspection report has been tallied, and if any discrepancy occurs, shall tally a second time in order to verify the first count. The Contractor shall return to the Railroad Company the identical timbers shipped to it by the Railroad Company after said timber has been treated, and in case there should be any shortage whatsoever, the Contractor shall pay for such timbers as it is unable to re-deliver to the Railroad Company at the market price for timber of that class at the time the shortage is discovered; provided, however, that the Contractor shall not be responsible for shortage resulting from fire which is to be covered by insur-



ance effected by the Railroad Company. In the event of fire destroying the timbers covered by this agreement, the Contractor shall be entitled to its then earned handling charges and treating charges applicable to the timbers destroyed.

16. The Railroad Company agrees to pay to the Contractor and Contractor agrees to accept in full for all services rendered except as specifically herein otherwise provided, the following rates per cubic foot of timber treated:

CROSS TIES

Douglas or Inland Fir. . . . .	.10-3/4¢ per cu.ft. of timber
Tamarack or Larch. . . . .	.9¢ " " " " "
Lodgepole or Ponderosa Pine. . . . .	.9¢ " " " " "

BRIDGE TIMBERS, LUMBER, CAR MATERIAL, AND BRIDGE AND SWITCH TIES

Fir and Larch . . . . .	\$12.00 per M. F.B.M. or 14.4¢ per cu.ft.
Pine. . . . .	\$10.00 " " " " " 12¢ " " "

PILING, POLES AND POSTS

Fir and Larch . . . . .	.15¢ per cubic ft. of timber
Cedar . . . . .	.14¢ " " " " "
Pine . . . . .	.13¢ " " " " "

The cubical contents of the various sizes, classes and kinds of timber treated shall be determined by joint measurement of the timber by representatives of the Railroad Company and of the Contractor.

17. The above prices are based on pressure treatment of air seasoned material. The Contractor shall cause timbers to be steam seasoned or artificially seasoned by boiling under vacuum as the Railroad Company may require and in such case the above prices shall be increased by two cents (2¢) per cubic foot to cover the additional expense involved.

The prices hereinabove stated shall cover all services of the Contractor in storing and handling the preservatives, edging, boring, incising, storing, treating and handling the timbers and all other services excepting where an additional charge is herein expressly provided.

The Railroad Company agrees to pay to the Contractor and the Contractor agrees to accept in compensation and settlement in



full for any handling which may be necessary to fulfill this agreement in addition to unloading timbers from cars to yard for storage and seasoning, loading on trams for treatment, and loading treated timbers for shipment, the following rates: One and one-half cents ( $1\frac{1}{2}\%$ ) per cross tie; fifty cents (50%) per thousand feet board measure for bridge and switch ties, bridge timbers, car material and lumber; one-half cent ( $\frac{1}{2}\%$ ) per lineal foot for piling and poles, and one-half cent ( $\frac{1}{2}\%$ ) each per post. In case it shall become necessary to store and reload timber for shipment after treatment on account of the Railroad Company's inability or failure to furnish cars as provided in section 8 hereof, the Railroad Company shall pay to the Contractor for such additional handling at the rates just hereinabove specified.

There shall be deducted from any amounts due the Contractor as hereinabove provided for treating timbers on hand at said plant May 1, 1937, any sums which the Railroad Company may pay to Washington Wood Preserving Company for services rendered in connection with said timbers prior to May 1, 1937; provided, that such payments to Washington Wood Preserving Company shall be upon a basis not in excess of that prescribed in the next preceding paragraph of this section for additional handling.

There shall be added to any amounts due the Contractor for treating timbers as hereinabove provided any taxes, contributions or assessments imposed by the Federal Social Security Act or the Unemployment Compensation Act of the State of Washington, or hereafter imposed by any law, statute or ordinance, federal, state, county or municipal, and which may be levied or assessed against the Contractor by reason of and based upon the storage, treatment or other handling of timbers for the account of the Railroad Company as provided in this agreement or which may be levied or assessed against the Contractor on account of or measured by the compensation paid by the Contractor to its employees for performing the services for the Railroad Company hereinbefore enumerated; provided, however, that if the Contractor shall recover or shall be refunded any moneys paid out by virtue of any



such levy or assessment such moneys, less the cost of recovering same shall be refunded by the Contractor to the Railroad Company.

18. Payments will be made by the Railroad Company on the twenty-fifth day of each month covering timber treated for it by the Contractor during the preceding month.

19. The Contractor is engaged in the business of treating poles, piling, posts and timber for persons and corporations other than the Railroad Company. If the facilities are available at the plant covered by this agreement for treatment of such materials for such commercial purposes, then the Contractor shall use said plant for commercial treatment of such materials in preference to any other plant now or hereafter owned or operated by the Contractor in the State of Washington; provided, however, that if the total of the inbound and outbound freight rates to any such plant owned or operated by the Contractor, other than the one covered by this agreement, shall be less than the total of the inbound and outbound freight rates to the plant covered by this agreement, then the provisions of this paragraph shall not be binding upon the Contractor and it shall be free to use any plant owned or operated by it as it may desire for commercial treatment of such materials.

20. If at any time the operation of the said plant or the delivery of timbers by the Railroad Company shall be temporarily suspended because of fire, strike, flood or other cause not within the control of the parties hereto, this agreement shall be suspended during such interruption and its period shall be extended for a term equal to that of the interruption, provided that in case of destruction of said plant by fire, the Railroad Company at its own expense shall promptly repair, rebuild and restore the same to substantially the same condition in which it was before such total or partial destruction.



21. All timbers, supplies, materials, preservatives, buildings and equipment belonging to the Railroad Company located upon the premises herein demised to the Contractor shall be insured by and at the expense of the Railroad Company and for its sole benefit.

22. The Contractor agrees to indemnify and hold harmless the Railroad Company for loss, damage or injury from any act or omission of the Contractor, its employees or agents, to the person or property of the parties hereto and of their employees and to the person or property of any other person or corporation while in or about said plant. The Railroad Company agrees to indemnify and hold harmless the Contractor for loss, damage or injury for any act or omission of the Railroad Company, its employees or agents, to the person or property of the parties hereto and of their employees and to the person or property of any other person or corporation while in or about said plants.

If any such liability shall arise from the joint or concurring negligence of both parties hereto, it shall be borne by them equally.

23. Any matter of difference whatsoever consequent on this agreement or on anything done hereunder, on demand of either party, shall be submitted for decision to three persons as follows, to-wit: The party demanding submission shall serve on the other party a written notice stating precisely the matter or matters to be submitted and the name of the arbitrator chosen by the serving party for this purpose, and only the matter or matters so stated shall be considered or decided by the arbitrators. If for fifteen days after receipt of said notice, the receiving party shall fail to deliver in writing to the serving party the name of the arbitrator chosen by receiving party, the serving party may apply to any Judge of the United States District Court, District of Minnesota, to appoint the second arbitrator, and such appointment shall be



binding on both parties. The two arbitrators chosen by either of said methods shall agree upon and select a third arbitrator, thus completing the Board. The first mentioned two arbitrators failing to agree on a third arbitrator within fifteen days following designation of that one of the two last chosen, either party may apply to the said District Judge to appoint the third arbitrator and such appointment shall be binding on both parties.

The Board of Arbitrators within thirty days following completion thereof, shall designate for the hearing a time and place, of which both parties shall be promptly notified in writing, and said hearing shall be held at said place within fifteen days following such designation. After hearing the testimony and arguments submitted by each side, said arbitrators or a majority of them shall, within the next ninety days, make their award, and when so made and delivered to both parties, said award shall be conclusive and binding and the parties hereto expressly agree to abide thereby.

Pending the award of arbitrators, there shall be no interruption in the transaction of business pursuant to this agreement, and statements and payments in respect thereto shall be made in the same manner as prior to the arising of such differences.

Each party shall pay for the services of and all personal expenses incurred by the arbitrator chosen by or for it, and both parties shall jointly and equally pay for the services of the third arbitrator and his expenses, together with all other and different expenses of the arbitration.

24. This agreement shall be in effect for a term of five years from May 1, 1937, and thereafter until terminated upon two years written notice given by either party to the other of its intention so to do. The provisions of this section shall be construed to make the earliest date at which such notice may be given May 1, 1940.

In case during the last year that this agreement shall



be in effect the Railroad Company may elect to deliver timbers to the said plant for storage and not for treatment the Contractor shall receive said timbers and shall place the same in storage and the Railroad Company shall pay to the Contractor as compensation for such service the sums provided in the third paragraph of section 17 hereof relating to compensation for additional handling. The provisions of sections 5, 6, 7, 8, 9, 10, 11, 14, 15, 21 and 22 hereof shall in all respects apply to this service except to the extent that said sections relate to the treatment of timbers and operations subsequent to treatment.

IN WITNESS WHEREOF, the parties hereto have cause this agreement to be executed by their duly authorized officers the day and year first hereinabove written.

In presence of:

R. A. Helgren.

H. F. Woodward

J. A. Helgren  
C. F. Helgren

NATIONAL POLE & TREATING CO. RMC

By

W. H. Morrison  
President.

Attest:

J. H. Munn  
Secretary.

GREAT NORTHERN RAILWAY COMPANY,

By

W. K. Munn  
Vice President.

Attest:

F. H. Munn  
Secretary.

Mr. Blum

Our conversation a few days ago about new tie treating contract of the Great Northern at Billyard. I have just recalled that this I overlooked asking Mr. Davis for a copy of this when I calling on him a few days ago to look out hand on connection with the Seattle Contract. Could you currently call him up to get a copy for our reference?

H. Yager

MR. YAGER:

Mr. Blum called Mr. Davis' office. Mr. Davis out of town so talked with Mr. Blinkhorn: Mr. Blinkhorn said he would furnish copy. Mr. Blum explained to him that if he furnished it in Mr. Davis' absence, he of course expected him to obtain proper authority before sending it.

T.R.G.

8/21/36



St. Paul, August 20, 1936.

MR. BLUM:

Our conversation a few days ago about new tie treating contract of the Great Northern at Hillyard. I have just recalled that I overlooked asking Mr. Davis for a copy of this when calling on him a few days ago to have on hand in connection with the Seattle Contract. Could you conveniently call him up to get a copy for our reference.

L. YAGER

MR. YAGER: ✓

Mr. Blum called Mr. Davis' office. Mr. Davis out of town so talked with Mr. Blinkhorn: Mr. Blinkhorn said he would furnish copy. Mr. Blum explained to him that if he furnished it in Mr. Davis' absence, he of course expected him to obtain proper authority before sending it.

T.R.G.

8/21/36

*L.Y. 8/22*

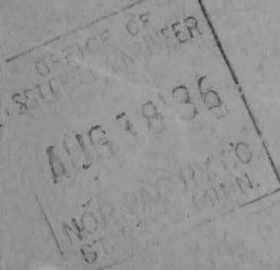
TREATED CROSS TIES SHIPPED - SEATTLE-PUGET SOUND-TACOMA DIVISIONS

FROM TREATING PLANTS - 1907 to AUGUST 1st, 1936.

YEAR	FROM BRAINERD	FROM PARADISE	FROM SEATTLE	TOTAL
1907				
1908		237		237
1909				
1910		5,623		5,623
1911		1,128		1,128
1912		40,281		40,281
1913		11,456		11,456
1914		6,936		6,936
1915		20,054		20,054
1916		11,900		11,900
1917		5,018		5,018
1918				
1919		10,125		10,125
1920		8,606		8,606
1921		73,397		73,397
1922	5,708			5,708
1923		56,227		56,227
1924		14,081		14,081
1925	6,954	343,171		350,125
1926	9,730	265,693		275,423
1927	6,607	104,682	175,963	287,252
1928	9,283		455,679	464,942
1929	14,339		395,351	409,690
1930	11,167		264,861	276,028
1931			216,133	216,133
1932	7,490		202,016	209,506
1933	9,217	1,840	86,414	97,471
1934	6,880	1,272	225,289	233,441
1935	3,909	3,429	103,430	110,768
1936	5,203		217,835	223,038
TOTALS	96,467	985,156	2,342,971	3,424,594

Brainerd, Minn.,  
August 17th, 1936.

*Don't - your phone  
call today*





# Estimated Cost of Haul on Ties

-----

Weight of Average Tie - Untreated 125 Lbs.

Weight of Average Tie - Treated 130 Lbs.

	<u>Per Tie</u>	<u>Total Per Tie</u>
Under present program at Paradise-		
Untreated tie 146 miles at \$0.003 per T.M.	\$0.0274	
Treated tie 237 miles at \$0.0225 per T.M.	0.0347	\$0.0621
Under present program at Seattle-		
Untreated tie 148 miles at \$0.003 per T.M.	0.0278	
Treated tie 100 miles at \$0.0015 per T.M.	0.0098	0.0376
If ties are purchased in Coast territory, treated at Paradise and returned to Tacoma Division-		
Untreated tie 689 miles at \$0.003 per T.M.	0.1290	
Treated tie 600 miles at 0.0015 per T.M.	0.0585	0.1875
If ties are purchased in Inland Empire, treated at Paradise and shipped to Tacoma Division-		
Untreated tie 146 miles at \$0.003 per T.M.	0.0274	
Treated tie 600 miles at \$0.0015 per T.M.	0.0585	0.0859

Brainerd, Minn.,  
August 11th, 1936.

N.P. 1344  
6-24

## Greece Dies Shipped to territory Ellenburg West

Year	Seattle	Puget Sound	Sacramento	Total
1908	-	-	237 P	237
10	5623 P	-	-	5623
11	-	-	1128 P	1128
12	40281 P	-	-	40281
13	11096 P	-	360 P	11456
14	5275 P	1425 P	236 P	6936
15	19768 P	286 P	-	20054
16	11900 P	-	-	11900
17	5018 P	-	-	5018
19	10125 P	-	-	10125
20	8088 P	271 P	247 P	8606
21	2031 P	17669 P	53697 P	73397
22	5708 P	none in Seattle	-	5708
23	19227 P	✓ Sacramento Area	37000 P	56227
24	8719 P		5362 P	14081
25	156778 P		186393 P	350125
26	6373 P		581 P	-
26	98278 P		167415 P	275423
27	7945 P		1785 P	287252
27	53907 P		59775 P	287252
28	196187 S		259492 S	464942
28	6945 S		2318 S	464942
29	164328 S		231023 S	409690
29	10815 S		3524 S	409690
30	142207 S		122654 S	276028
30	11167 S			276028
31	77061 S		139072 S	216133
32	(none in Sacramento)		2020416 S	209506
33			87474 S	97471
34			1240 S	
35				
36				

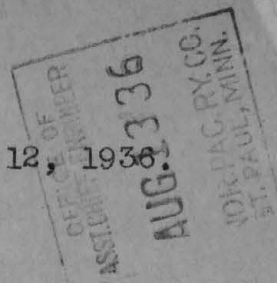


Mr. Gilson

Soon as you return want to see  
figures on treated trees shipped <sup>by</sup> <sup>cars</sup>  
to timber Ellensburg & West since  
first treated trees were shipped there.

L.F. 8/12

Brainerd, Minn., August 12, 1936

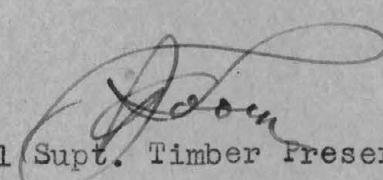


Mr. L. Yager:

I have prepared the attached statements as a tentative basis for our negotiations with the West Coast Wood Preserving Company, relative to the Seattle contract which expires December 31st.

There are many items that you will wish to discuss and perhaps revise in preparing complete data for use in final conference, and I shall be glad to go over this with you at any time you may state.

L  
enc

  
Gen'l Supt. Timber Preservation.

Cy.-B.B.

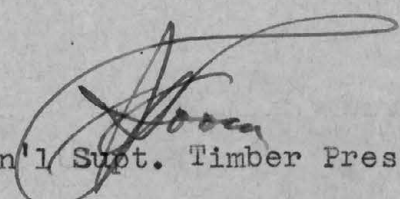


Brainerd, Minn., Aug. 10, 1936.

MR. L. YAGER:

Statement of material treated under contract at  
Seattle (Coleman Co. and West Coast Wood Preserving Co.) to  
August 1st, 1936:

Year	CROSS TIE EQUIVALENTS			TOTAL
	Cross Ties	Switch Ties	Misc. (Piling, Lbr. Tie Plugs, etc.)	
1927	176,045	14,181	42,999	233,225
1928	468,231	25,314	31,040	524,585
1929	405,893	30,067	12,714	448,674
1930	262,784	None	15,177	277,961
1931	223,030	29,544	10,907	263,481
1932	244,255	17,142	10,448	271,845
1933	102,963	13,354	8,733	125,050
1934	246,455	15,550	5,716	267,721
1935	112,276	14,692	11,186	138,154
1936 to 8-1-36	<u>276,582</u>	<u>34,477</u>	<u>11,542</u>	<u>322,601</u>
TOTAL	2518,514	194,321	160,462	2,873,297

  
Gen'l Supt. Timber Preservation.

Estimate of Cross Tie Renewals Required on  
Tacoma Division beginning with 1937.

-----

Total Ties in all Tracks (Form AA-1936)	4,901,039
Total Treated Ties delivered to date	<u>3,424,594</u>
Balance Untreated Ties in Track (Assuming no treated ties replaced)	1,476,445
Estimated percentage of untreated ties in track	30%
Estimated percentage of treated ties in track	70%

Based on a 10-year life or a 10% annual renewal for untreated ties and a 25-year life or a 4% renewal for treated ties.  
Assuming only treated ties used for renewals.

Year	Total Ties in Track		Estimated Renewal	
	Untreated	Treated	No. Ties	Per Cent
1937	1,476,445	3,424,594	284,639	5.9%
1938	1,191,806	3,709,233	267,550	5.5%
1939	924,256	3,976,783	251,497	5.1%
1940	672,759	4,228,280	236,407	4.8
1941	436,352	4,464,687	222,222	4.5
1942	214,130	4,686,909	208,889	4.3
1943	5,241	4,895,798	201,073	4.1
1944	0	4,901,039	196,041	4.0

Brainerd, Minn.,  
August 11th, 1936.



COMPARISON OF TREATING COSTS  
Cost at Paradise and Cost under Contract at Seattle

<u>Items</u>	<u>Paradise Per Tie</u>	<u>Seattle Per Tie</u>
1 Cost under Seattle Contract	--	\$0.2600
2 Creosote 1.35 Gal. @ 13.5¢	\$0.1823	.1823
3 Petroleum 1.65 " @ 2.1¢	.0347	.0347
4 Unloading & Crosspiling	.0200 ✓	--
5 Loading for Transfer	.0140 ✓	--
6 Handling through machines	.0180 ✓	--
7 Loading for shipment	.0120 ✓	--
8 Fuel exclusive of haul	.0063 ✓	--
9 Plant Labor- Operation & Repairs	.0262	--
10 Supervision <i>Local General-va</i>	.0078	--
11 Material & Supplies <i>for Repairs</i>	.0049	--
12 Total "A" Direct Cost Items-Paradise .3262		
13 Interest on Investment 6% <i>on Bonds</i>	.0125	
14 Depreciation 3%	.0063	
15 Taxes on Plant	.0012	
16 Insurance on Plant	.0006	
17 Interest on Preservatives 6%	.0003	.0006
18 Taxes on Preservatives	.0004	.0008
19 Insurance on Preservatives	.0003	.0003
20 Taxes on Seasoning Ties	.0067	.0118
21 Insurance on Seasoning Ties	.0026	.0026
22 Interest on Seasoning Ties	.0291	.0273
23 Total "B" Overhead Items-Paradise .0600		
24 Freight on Creosote	.0111	--
25 " " Petroleum	.0108	--
26 " " Coal	.0047	--
27 " " Untreated Ties	.0274	.0278
28 Total "C" Freight Items-Paradise .0540		
29 Treating Inspector-Seattle	--	.0080
30 Total Cost of Treatment	.4402	.5562
31 Present Cost of <del>H</del> aul on Ties	.0612	.0376
32 Cost of Treatment and Haul	\$0.5014	\$0.5938
33 Haul justified on Paradise ties to equal cost of treating at Seattle under present contract	.1536	

Brainerd, Minn.,  
August 5th, 1936.

Estimated Breakdown of Seattle Contractor's Charge  
For Treating Cross Ties

-----

Contract price of \$6.50 per M. FBM for 12 Hour treatment is equivalent to \$0.2430 per 7" x 8" - 8' tie.

Price actually paid the Contractor for treatment of all cross ties treated to August 1st, 1936 - \$0.2600 per tie. This includes charges for treatment which required time in excess of 12 hours.

Estimated Items of Expense included in Contractor's Price, that correspond with Out of Pocket Cost of treating ties at Paradise:

	<u>Paradise</u> <u>Per Tie</u>	<u>Seattle</u> <u>Per Tie</u>
1 Unloading & Crosspiling	\$0.0200	} \$0.0400
2 Loading for Transfer	0.0140	
3 Handling through Machines	0.0180	
4 Loading for Shipment	0.0120	
5 Fuel	0.0063	0.0200
6 Plant Labor-Operation & Repairs	0.0262	0.0260
7 Material and Supplies	<u>0.0049</u>	<u>0.0100</u>
	\$0.1014	\$0.0960

Additional Estimated items of contractor's expense that correspond with the same items comprising cost of treatment at Paradise:

8 Supervision	.0078	.0110
9 Interest on Investment 6%	.0125	.0300
10 Amortization of Plant in 10 years	--	.1000
11 Depreciation at 3%	.0063	--
12 Taxes on Plant	.0012	.0120
13 Insurance on Plant	.0006	.0010
14 Miscellaneous	<u>--</u>	<u>.0100</u>
	\$0.1298	\$0.2600

Brainerd, Minn.,  
August 5th, 1936.



Saint Paul, August 6, 1936w

MR. BERNARD BLUM:

In connection with my recent visit to Seattle to prepare the way for discussions with the West Coast Wood Preserving Company on our contract, I obtained from Mr. Burnham's office a statement of commercial shipments to and from our Seattle plant for the last eighteen months. The figures are shown on the attached statement.

I have no present information that has any bearing on any question that might be raised as to whether this favorable showing of the Northern Pacific represents a favorable attitude on the part of the Wood Preserving Company, or whether it is influenced more predominantly by other factors governing the routing of business.

L. YAGER.

MEMORANDUM

DATA ON CARLOAD SHIPMENTS TO AND FROM THE SEATTLE PLANT OF  
THE WEST COAST WOOD PRESERVING COMPANY. INFORMATION FURNISHED  
BY MR. SHAEFER OF J. L. BURNHAM'S OFFICE, SEATTLE, WASH.,  
JULY 31, 1936.

(A) YEAR 1935

(1) Forwarded:

	N. P.	U. P.	G. N.	Milw.	Total
1. Transcontinental	44	2	4	6	56
2. Short haul	43	1		1	45
3. Total	87	3	4	7	101

(2) Received

4. Transcontinental	-	-	-	-	-
5. Short haul	9	14	2	2	27
6. Grand Total	96	17	6	9	128

(B) SIX MONTHS YEAR 1936

Forwarded

7. Transcontinental	33	-	2	3	38
8. Short haul	61	-	2	-	63
9. Total	94	-	4	3	101

Received

10. Short haul

5

5

Asst. Chief Engineer  
St. Paul, Minn.  
August 4, 1936w



# West Coast Wood pres Co

## Forwarded

1935	np	up	gn	miles	Total
Tc	44	2	4	6	56
AH	43	1		1	45

## Received

Tc	-				-
AH	9	14	2	2	27

## Forwarded

6 mos 1936	np	up	gn	miles	Total
Tc	33	-	2	3	38
AH	61		2		63

## Received

AH	5	-	-	-	5
----	---	---	---	---	---

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25  
15

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N. P. 1386  
12-24

# TELEGRAM—BE BRIEF

TIME FILED

M.

StPaul July 24 1936w

A J Loom,

Brainerd

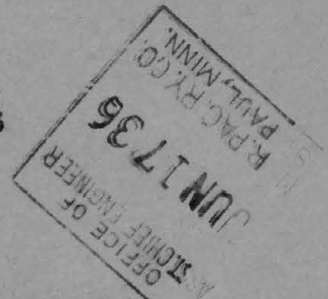
Leaving here Train One Saturday for Seattle Y-354

L. Yager  
3pm

922

1

Saint Paul, June 16, 1936



Mr. H. E. Stevens:

Your letter of the thirteenth about extension of contract with the West Coast Preserving Company for treating ties at Seattle.

While my letter on the point you raise is not clear, the talk I had with Mr. Yager was along the lines of a contract without commitment as to the number of ties to be treated, either in total or for any year, and also that the prices should not be set for a long term. Of course, commitment as to terms, would not be made without proper approval.

BERNARD BLUM

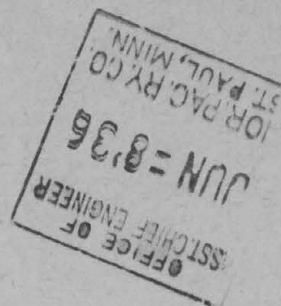
cc Mr. L. Yager ✓

*Handwritten signature: L. Yager*



1

Saint Paul, June 8, 1936



Mr. L. Yager:

Your letter of the fifth about the contract of November 4, 1926 expiring on December 31st.

As I stated, it seems to me we should be able to obtain a new contract with these people with no minimum requirements. The maximum number of ties to be treated would seem to be limited by the capacity of their plant.

It also seems to me that we should be able to work out better prices than those stipulated in the present contract. It is my understanding that the Colman Company went to considerable expense to take care of our needs and it is presumed that they amortized such investment through the prices which we have paid for the past ten years. We should be able to obtain a reduction commensurate with such elements of cost contained in the present prices. It may well be that the level of treating costs has gone down which may permit further reduction.

It is my understanding that you negotiated the present contract. I suggest you start negotiations with the West Coast people at an early date.

cc Mr. Lowry Smith  
Mr. A. J. Loom

*Bernard Blum*

*30*  
*Phoned A. J. Loom to get 3000,000*  
*data w/letter + came to office for a*  
*discussion*  
*ALJ*  
*1/9*

Saint Paul, June 5, 1936w

MR. BERNARD BLUM:

Contract dated November 4, 1926 with the J. M. Colman Company, later assigned to the West Coast Wood Preserving Company, for treating ties at Seattle, expires December 31, 1936. This contract provides that the Northern Pacific treat the equivalent of 3,000,000 cross ties in the ten year period of the contract. There has been treated total including 1936 up to June 1, 1936, the equivalent of 2,841,809 cross ties. The seasoning stock now being assembled for 1937 renewal season, amounting to 329,000 ties which are to be treated late this fall and early next winter, will more than cover the contract guarantee.

We should make arrangements soon with the contractor for a continuation of the present contract, or a new contract. I do not believe we would have any difficulty in getting a new contract at the present unit treating costs under an arrangement which would not require us to treat any specified minimum or maximum ties per year; in other words, treat for us such ties as we might require from time to time. It is barely possible that negotiations might result in some improvements in connection with these unit prices to us.

If for any reason the contract should not be continued, we would have to start treating early this fall so as to have all ties treated and removed from the plant before January 1, 1937.

L. YAGER.



Mr. Loomis

Contract dated November 4th 1926.  
with The J. M. Coleman Company - later assigned to  
West Coast Wood Preserving Company - for treating  
ties at Seattle expires January 1, 1937 -

Mr. Loomis has furnished statement showing  
cross ties or equivalent treated to May 31, 1936, 2,841,809  
leaving 158,191 to be treated by December 31st next -  
some of which will be treated from time to time on  
supplementary orders.

Ties assigned to Seattle Plant on Annual  
Requisition for 1937 - 329,000, delivered to  
May 21 - 291,036 - balance 37,974 due.

H. J. L.

W. J. L.

Brainerd, Minn., June 4, 1936.

ST. PAUL, MINN.  
NOR. PAC. RY. CO.  
JUN-5-36  
ASSISTING ENGINEER  
OFFICE OF

MR. T. R. GIBSON:

In compliance with your telephone request, following is statement of material treated under contract at Seattle (Colman Co. & W.C.W.P. Co.) up to and including May 31st, 1936:

CROSS TIE EQUIVALENTS				
Year	Cross Ties	Switch Ties	Miscellaneous (Piling, Lumber, Tie Plugs, etc.)	TOTAL
1927	176,045	14,181	42,999	233,225
1928	468,231	25,314	31,040	524,585
1929	405,893	30,067	12,714	448,674
1930	262,784	None	15,177	277,961
1931	223,030	29,544	10,907	263,481
1932	244,255	17,142	10,448	271,845
1933	102,963	13,354	8,733	125,050
1934	246,455	15,550	5,716	267,721
1935	112,276	14,692	11,186	138,154
1936 to & Includg 5-31-36	265,990	14,334	10,789	291,113
TOTAL	2,507,922	174,178	159,709	2,841,809

In addition to the above there are a couple AFE tie orders to fill and the orders phoned us today, amounting to 5,259 in all, which will increase the total treated figure to 2,847,068 when completed.

*T. R. Gibson*  
Gen'l Supt. Tr. Preservation.