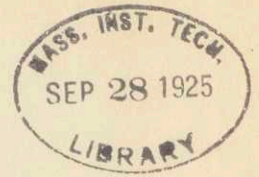


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Massachusetts Institute of Technology

THESIS

TERMINAL PROBLEM OF AN INDUSTRIAL
RAILROAD

H. M. Lyons Submitted by E. D. Lucy

Course XV-2

1925
✓

T A B L E O F C O N T E N T S.

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Cambridge, Massachusetts,
May , 1925.

Professor A. L. Merrill,
Secretary of the Faculty,
Massachusetts Institute
of Technology.

Dear Sir:-

In partial fulfillment of the require-
ments for the Degree of Bachelor of Science from
the Massachusetts Institute of Technology, this
thesis is herewith presented.

Respectfully yours,

Signature redacted

Signature redacted

Preface

A short time ago, we became acquainted with an interesting traffic situation which confronts a group of five neighboring Companies, located on the outskirts of Boston. It appealed to us as a subject particularly well adapted for thesis work.

We wish to express our appreciation for courtesies extended to us during the progress of our work, to Captain W. E. McKay, Mr. H. S. Lyons, Mr. R. M. Folsom and Mr. H. M. Waybright. Through their readiness to help us and advise us in all ways, our work was made most pleasant and effective.

We also wish to acknowledge the valuable criticism and assistance rendered by Professor M. J. Shugrue of the Department of Economics at Massachusetts Institute of Technology.

Statement of Problem

The Bay State Transit Company owns and operates a railroad yard in Everett comprising approximately forty acres of valuable land, twenty-seven miles of rail, and right of way. Besides serving the business of The Bay State Transit Company, the yard serves four adjoining companies, namely:

1. The Everett Consolidated Gas Company
2. The Commonwealth Oil Company
3. The River Iron Works (now under construction)
4. The Buckley Roofing Company.

The Bay State Transit Company operates six locomotives, a round house, and all necessary equipment to render complete terminal service for all five companies.

The yard is located directly off of the Boston & Albany main line with the Boston & Maine running parallel to it. A crossover must be made over the Boston & Albany tracks to permit the Boston & Maine cars to enter the yard.

At present the railroads leave their trains a short distance off their tracks on the storage tracks of the Bay State Transit Company and when calling for outgoing cars find the trains made up for them on clear tracks. All intervening work such as weighing and "spotting" of cars is done by the Bay State Transit Company for the several companies.

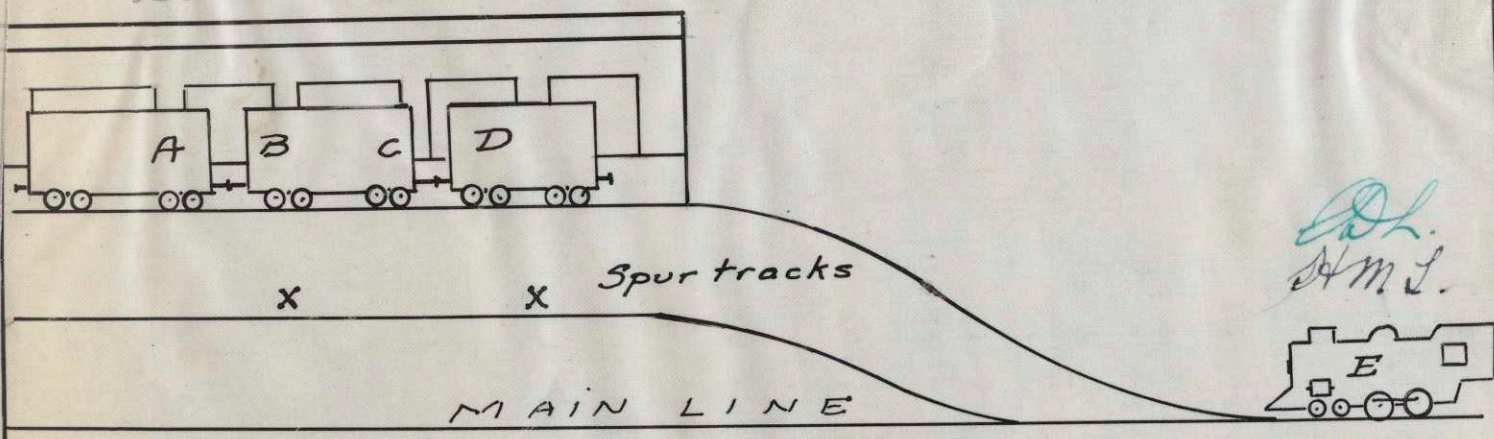
The Bay State Transit Company is of the opinion that the expense incidental to the carrying on of this work should be shared by the railroads, on the grounds that much of this intervening work is such as may be rightfully required of a

railroad to justify the present through rates. It is our purpose to consider and to decide the best method of obtaining relief for the companies in question. This end might be accomplished by any of three methods, namely:

1. Incorporation as a common carrier (terminal railroad).
2. Letting the Boston & Albany and Boston & Maine do the work in question with their own men and equipment.
3. Continuing as at present, but with the Boston & Albany and Boston & Maine making an allowance to the Bay State Transit Company for all railroad work which it performs.

General Survey

It is customary in the United States for common carrier railroads, in order to collect the through rates as set forth by the Interstate Commerce Commission on shipments between any two points, to perform certain duties incidental to the delivery thereof. In the case of an ordinary consignee who has privately owned side tracks connecting with trunk lines the railroad is expected to deliver cars, loaded or unloaded, on such sidings at points available for loading and unloading. This service is called "spotting" the cars and is performed without charge additional to the through freight rate. The through rate includes the service (after the cars have been unloaded or loaded) of having the railroad take charge of the cars, make up trains and deliver them to the main line. All car movements such as diagrammed below, necessary for this service, are performed at the expense of the railroad.



Suppose car A is to be shipped out and B, C and D are not yet ready. Engine E must come in and get the cars B, C and D, take them out and shunt them to X, get car A and

bring it out to the main track, leave it, return to X, get B, C and D and return them to their original positions, then proceed to ship car A. These services are performed largely at the convenience of the railroad.

In recent years, the development of business has caused industries to expand, spreading over large areas. This growth in many cases has brought about the necessity of intraplant transportation - a service distinct from the spotting of inbound and outbound cars - which must nevertheless be carried on in harmony therewith. In such cases large companies have often found that to keep their plants running smoothly and without numerous delays they could not allow the spotting of their cars to be done at the convenience of the railroads.

Consequently at great expense many companies have bought private equipment, and have built and maintained their own yards. In short they have operated a short line of their own and have taken over both the spotting and the intraplant service and perform both in harmony with each other. Of course, all the work done by these private lines has not been railroad work. On the other hand, much of the work is railroad work and consequently there is a considerable saving for the railroads in having this work done by a private company.. In the above case it is evident that much work properly belonging to the common carriers is being done at considerable expense by the private company. We are of the opinion that the Bay State Transit Company is entitled to part of the through rate from the railroads for reasons as follows:

1. The Company is maintaining its own storage tracks, thus relieving the railroad from the necessity of increasing their terminal facilities in the vicinity of the plants.

2. By the Company using its own equipment in the switching of cars from the storage tracks to the several plants, the railroads are saved the ordinary expense of such work in this particular case.

3. The railroads deliver to and take from the plant's storage yards trains or cars instead of single units which decreases the cost of handling to the railroads. Ordinarily the railroads have to collect the cars singly, bring them together and make up the trains themselves - a function which requires considerable time and expense.

4. The spotting or placing of cars at doors of the plant or wherever needed is one of the services upon which the railroads base their rates. When this is not done by the road there ought to be a reduction in the through rate which is charged.

5. When the present practice went into effect about 25 years ago, only a few cars were used daily and only by the Bay State Transit Company. Since that time the business has increased tremendously, and with it the amount of cars handled, until now about 40,000 cars per year is not an excessive average. Now there are several industries served by the company's private equipment at no expense to the railroad. Consequently, we believe that the free performance of

this service has become a burden which the Company should not be required to bear, and that it is entitled to relief at the expense of the railroad.

Methods of Solution.

A. First method. Incorporating as a common carrier.

The present service could be performed as now if a common carrier railroad was incorporated. There would be no change in the operation of the Everett Yard from its present status. The Boston & Maine Railroad and the Boston & Albany Railroad would bring their empty trains and leave them on the storage tracks. The new common carrier railroad would then get the cars and deliver them as needed to the several plants. After loading, the new company's equipment would bring the cars from the plant to the outgoing storage tracks and make up trains which would then be taken charge of by either the Boston & Maine or the Boston & Albany.

1. Advantages of this plan.

(a) If this plan were followed the work would be done as at present, entirely at the convenience of the individual plants and the make-up trains would be moved entirely at the convenience of the Trunk Line railroads.

(b) The plant and railroad work would continue ~~in~~ in perfect harmony.

(c) Financial advantage. The proportion of the charges which goes to pay for the work which is ordinarily done by the railroads would be taken from the through rate to an amount as determined by the Interstate Commerce Commission. This would not reduce the present cost of extra moves but would represent a saving to the companies served of approximately

\$4.00 for each car handled.

2. Disadvantages of this plan.

(a) Demurrage. The question of demurrage would not affect the coke cars or the tank cars. However, it would affect the coal cars as there is a definite demurrage charge on coal cars held for more than the allotted two "free days". It has been found that the average demurrage per car would amount to about \$2.00 per car loaded. This would not in all probability exceed \$25,000 per year.

(b) Government Regulation. If the road were incorporated as a common carrier it would automatically come under the jurisdiction of the Interstate Commerce Commission. This would subject the new company to the rules and regulations of the Interstate Commerce Commission as they are at present or may be in the future.

(c) Labor. The employees of the new railroad would necessarily become affiliated with the numerous railroad labor organizations and be subject to the decisions of the Railroad Labor Board. This might cause friction through strikes and dissension. It would mean the inauguration of the seniority rules of promotion which is especially objectionable at terminals. Wages would have to be in accordance with the rules of the railroad board and of railroad labor organizations generally.

(d) State Regulation. Another objection is that the common carrier railroad would be (as far as intra-

state business is concerned) subject to certain rules and regulations of the Department of Public Utilities of the state of Massachusetts.

(e) Equipment. The equipment of the terminal railroad such as: locomotives, cars, road-beds, switches, tracks, etc. would be subject to the control and under the inspection of officials of the Interstate Commerce Commission. This would mean greatly increased expense to the new railroad both for installing and maintaining equipment, which would meet the specifications set up by the Interstate Commerce Commission. A large percentage of the present equipment, although perfectly satisfactory for the service to which it is now being put, does not meet the Commission's requirements. This would necessarily mean that much of the equipment now used would be discarded. The road-bed also would have to be considerably improved - an expensive undertaking - to meet the Interstate Commerce specifications.

(f) Records and bookkeeping expense. The Interstate Commerce Commission requires an elaborate system of bookkeeping of all railroads that are incorporated as common carriers. Extensive reports and statements must be submitted periodically. This entails the creation of a clerical force and would be a source of considerable additional expense.

(g) Friction with trunk line railroads. It is quite possible and very probable that the older lines might take a hostile attitude toward the new railroad. This would

impair the excellent service now enjoyed and disturb the present pleasant relationship between the parties.

(h) Service to outside shippers. If the road were incorporated, certain service difficulties might arise. A common carrier is legally bound to serve all within its radius who desire to avail themselves of its facilities at rates fixed by the Interstate Commerce Commission. There is some land bordering on the tracks of the Bay State Transit Company which as yet is undeveloped and any industry which might be developed on this property could demand service. This might over-tax the capacity of the Bay State Transit Company's yard and consequently be responsible for crowded conditions and inferior service to the present companies.

3. Legal Status of this plan.

This plan could probably be put through satisfactorily, for it would seem that the Company could legally establish its right to be recognized as a common carrier without substantial difficulty. Were this plan put through and the switching charge (approximately \$4.00 per car) granted, it is probable that the trunk line railroads would try to establish the fact that the present scheme had been in effect for so long that the through rate which they are allowed to charge at the present time had become to cover only the services which they actually are performing. The Commission might find favorably for the trunk line railroads in which case the effect would be to raise the through rate

\$4.00 per car. This, of course, would automatically cancel any gains which the Company might acquire by becoming a common carrier.

4. Summary of first plan.

A careful consideration of the foregoing facts both pro and con indicates that this plan is not as advantageous as might be thought. There have been several substantial disadvantages noted and when balanced with the advantages seem to outweigh them. The plan is obviously better than the existing one or at least has better possibilities, if the loophole mentioned in the preceding paragraph (increasing the through rate) does not materialize.

A strong point in favor of incorporating as a common carrier is that the present excellent service under unified control would continue to be enjoyed at a somewhat lower cost. However, at any time after incorporating the quality of the present service might be lowered as a result of demands for service from new outside industries which might be developed nearby.

B. Second method. Let the Boston & Albany and the Boston & Maine do the work in question with their own men and equipment.

1. Advantages.

(a) The burden of doing the work of the Boston & Maine and the Boston & Albany Railroads would be removed from the Bay State Transit Company.

(b) This plan would lower the amount of equipment and the size of the crews necessary to do the plant work in the yard.

2. Objections.

(a) Since all of the work in the yard is not railroad work it is evident that the Bay State Transit Company would have to maintain and operate equipment of their own. It is doubtful if the railroad's equipment could be hired to do this plant work - besides doing their own railroad work. Possibly an agreement might be reached between the Boston & Albany and the Boston & Maine Railroads whereby either one would undertake to do all the railroad work in the yard, performing the other railroad's work at a specified cost per car. In this case the locomotives of the Bay State Transit Company (probably at least three of them would have to be operated to accomplish the plant work) and those of the railroad would be moving about the yard and the movements would have ceased to be under unified control. There would be a certain amount of confusion due to this split control, and collisions and other accidents might result.

(b) The plant work would no longer be co-ordinated with the railroad work and the present harmony with which the two are carried on would be destroyed. The railroads could not cooperate fully with the Company in the matter of moving cars, and the efficiency of the yard operation would suffer materially.

(c) In the case that the Railroads did not agree upon the one to do all of the work and both entered to do its own work, hopeless confusion would result. The congested condition of the yard could not possibly accommodate the movements of three distinct units under separate control.

(d) Another factor would enter into this case. The situation of having equipments and crews of the main lines with the crews organized and subject to regulation of the Interstate Commerce Commission and union supervision would probably stir up a certain amount of strife or friction.

(e) Then the matter of the Railroad's inability to send its heaviest locomotives on to the road-bed of the yard with safety would cause trouble by restricting the size of engines which the Boston & Albany and the Boston & Maine railroads could send in to the Bay State Transit Company's yard

3. Summary of second plan.

Were this plan adopted a saving would be realized. However, it would be impossible to maintain the present excellent service and hopeless confusion in the yard would exist. Therefore, the plan does not merit further consideration.

C. Third method. Continue as at present both with Railroads making an allowance for all railroad work done by the yard crews and equipment.

The procedure in this case would be to continue as at present with the yard still the property of the Bay State Transit Company and with their equipment doing the work, and no incorporation. Under this plan no change in the

present equipment or personnel would be necessary.

1. Advantages.

(a) As in the first plan the Railroads would simply leave the cars in the Bay State Transit Company's yard. The Company locomotives would then take charge and perform both the intraplant duties and the railroad work (that is, they would spot the cars for the railroads and provide for all extra moves which might be necessary and they would take out the cars, make up the trains and leave them ready to be taken out to the main lines).

(b) The yard would continue to be under unified control. The Bay State Transit Company would still have full charge of all yard operations and would be able to co-ordinate the railroad and plant moves. The present equipment could continue to be used. This equipment is perfectly satisfactory for the use to which it is put by the Company in its present status as an industrial railroad. However, much of it does not come up to the specifications set by the Interstate Commerce Commission.

(c) Government regulations. The Interstate Commerce Commission restrictions and regulations would not apply any more than at present.

(d) Financial. The adoption of this plan would mean that the Railroads would compensate the Bay State Transit Company for the services which are now being used at the expense of the different companies concerned. If the proposed

allowance is obtained (\$4.00 per car) on the basis of the 1923 shipments this would amount to approximately \$153,000 a year.

2. Disadvantages.

(a) The labor and expense of bringing the case up before the Interstate Commerce Commission would be considerable. Also if the decision was favorable there would be considerable difficulty in coming to a settlement with the railroads as to a fair allowance.

(b) The roads might petition and receive an increased through rate which, if granted, would automatically cancel the advantages which the Company might gain to the amount of the increase.

3. Legal aspect. The question of allowances for work done, given by a Railroad to a shipper bring to mind the subject of rebates. Reabtes, by order of the courts are illegal. In this case the allowance is distinctly different from a rebate. A rebate is an allowance made as an extra inducement to shipper to patronize the Railroad with no physical reason behind it.

This proposed allowance from the Railroads to the Bay State Transit Company, however, cannot be considered a rebate as it simply would be a payment for services rendered by the Company which is part of the Railroad's duty in completing the delivery of freight. (Sec. 15, Art. 13 Interstate Commerce Act).

5. Summary of third method.

A survey of the facts for and against the plan indicates that it is worthy of careful consideration. The vital point of rendering complete and efficient terminal service to the Companies would be accomplished. A substantial saving (proportional to the number of cars handled) would be realized. The yard would continue to be under unified control - that of the Bay State Transit Company. The expense of putting the plan into operation would be amply repaid in the form of future savings.

Recommendations and Conclusions.

After weighing the points in each solution carefully, we have concluded that the third plan is the best of the three. If successful it will retain all the advantages of the first plan while excluding several of its disadvantages.

We, therefore, recommend that proceedings be started with the Boston & Albany and the Boston & Maine Railroad officials with the end in view of obtaining a fair allowance for the Bay State Transit Company from them. This allowance to be a specified amount per ton for all freight handled by the Bay State Transit Company.

In the event that no satisfactory agreement with the Railroads can be reached the matter can be laid before the Interstate Commerce Commission, then, if necessary, an adjustment through the courts will have to be attempted.

General Discussion.

Basing our conclusions on paragraph 13, Section 15 of the Interstate Commerce Act, we believe that the Interstate Commerce Commission would clearly recognize the right of the Bay State Transit Company to obtain compensation for that railroad work which they now perform free of charge for the Railroads, incidental to the complete delivery and despatch of freight to and from the Bay State Transit Company's yard.

"If the owner of property transported under this act directly or indirectly renders any service connected with such transportation or furnishes any instrumentality used therein the charge shall be no more than is just and reasonable." This is equivalent to saying that just and reasonable charge and allowance may be made where such services are rendered.

From our own observation (limited to $4\frac{1}{2}$ full days spent in timing the movements of the Company's locomotives), we are confident that the Interstate Commerce Commission can be shown and would decide that a large percentage of the engine-hours are spent in performing duties, which, when the through rate was established, were considered part of the Railroad's work.

Due to the fact that the time available for yard observation was very limited, we do not feel qualified to set any specific value to the ratio of plant work to railroad work now done by the Company engines. However, our

observations, as shown in Appendix , would indicate that about three fifths of the total engine-hours are being allotted to railroad work, the rest being devoted to plant service.

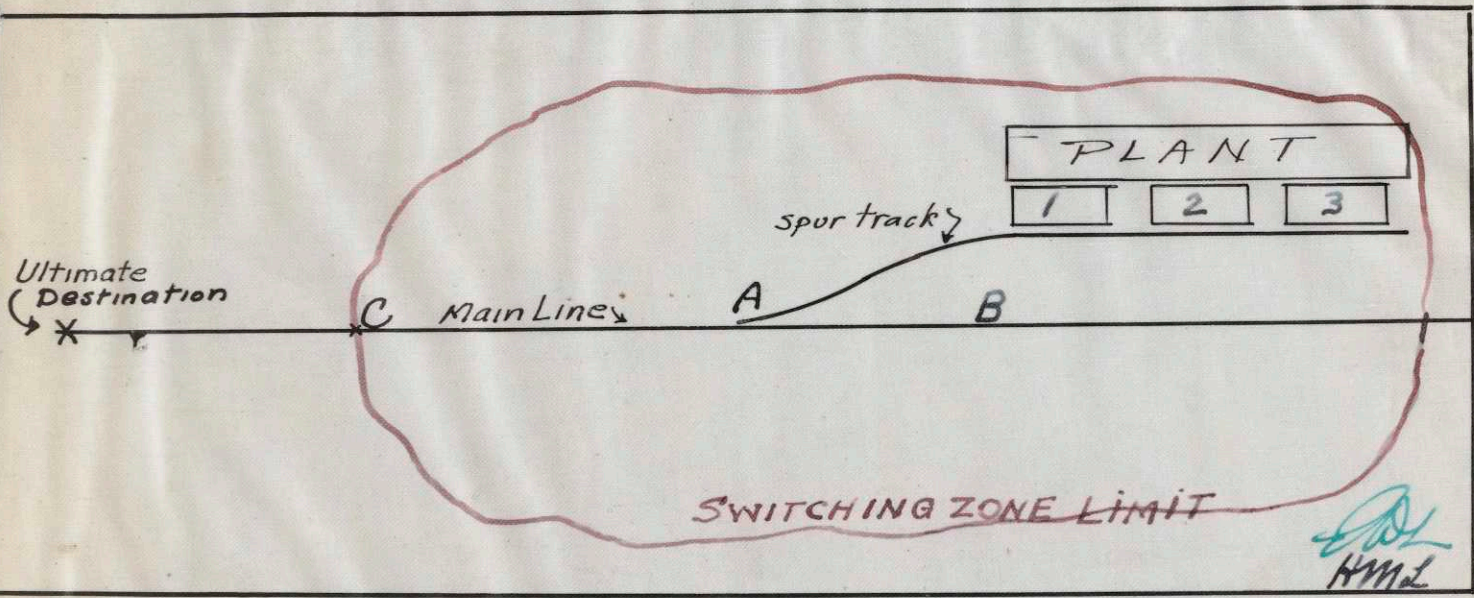
Of course, the attitude of the Commission can not be forecasted. There is a possibility that a decision might be returned unfavorably - as in the case of the General Electric Company of Schenectady, New York. This decision was based largely on the fact that this railroad work was done, not for the convenience or benefit of the railroads, but as a plant facility to co-ordinate the operation of the various units of the General Electric Company's plant. The case of the Bay State Transit Company is in our opinion a much stronger one, as this Company does the work not solely for its own benefit, but for the expediting of the freight handling of four other separate and distinct plants, namely:

1. The Everett Consolidated Gas Company
2. The Commonwealth Oil Company
3. The River Iron Works (now under construction)
4. The Buckley Roofing Company.

The evil sought to be obviated in the act to regulate commerce was the discrimination which existed among shippers. In the case of the Bay State Transit Company, this evil, we believe, still exists, inasmuch as the Bay State Transit Company furnishes locomotives, repair tracks, storage and yard space and roadbed at its own expense, while their

competitors are afforded all of these facilities by the Railroad Companies without additional charge to the through rate.

The fact that the Railroads are obtaining a greater rate than is warranted in this case can be shown pictorially. Also the fact that the Bay State Transit Company is undertaking a large portion of the work upon which the through charge is based.



This shows what is done for the Charles River Stores by the Railroads - a typical case - free of charge. The

Charles River Stores have no storage apace. They have no repair track, they have neither engine nor crew. Therefore, the Railroad must provide all of these for every movement of cars.

Take a typical case of a car movement. Suppose car 3, at the Charles River warehouse, is ready for shipment. The Railroad's locomotives must come onto the spur, pick up cars 1 and 2, bring them out to A, and then kick them off to point B. Then it has to return to the spur, pick up car 3, bring it to A, and then to B, hitch on cars 1 and 2, go back to A, and then back onto the spur, spotting cars 1 and 2 at their original location, unhitch them and proceed to take out car 3.

In figuring out the through rate the Interstate Commerce Commission allows a charge of about \$10. for a single line haul in this zone. For the \$10. the Railroad in the case of the Charles River Stores does all the work described and explained in the diagram.

Now considering the diagram to apply (for example) to the Buckley Roofing Company, the Railroad would find car 3 at point A already to be taken out to the main line. In this case all the work described has been done by the equipment and crews of the Bay State Transit Company on their own tracks, - point A being the private storage yard of the Bay State Transit Company.

This shows that the Railroad would receive \$10.

from the Buckley Roofing Company for simply moving the car from point A to point C and as the Bay State Transit Company does some of the work upon which this \$10. rate is figured it should receive a portion of it from the Railroads.

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Specimen observations taken in the yard, timing movements of the Company locomotives to determine approximate time spent on Railroad work.

Engine #6.

Monday afternoon, March 23, 1925.

- 1:00 - 1:24 Picking up and weighing cars and bringing them to pocket to load. (Railroad).
- 1:24 - 2:05 Loading at pocket. (Plant).
- 2:05 - 2:32 Taking out, weighing and setting on outgoing tracks. (Railroad).
- 2:32 - 3:12 Went to track 11, got cars and set 6 to crusher, 8 to jerk 3, 8 to Grizzly #1, 2 to Beacham Street track. (Railroad).
- 3:12 - 3:30 Picked up coke cars, weighed them - 5 Boston & Maine, 3 New Haven, 1 Bay State. Switched as follows: 1 to Boston & Maine 3, 1 to Boston & Maine 6, 1 to Boston & Maine 1, 2 to Boston & Albany, 1 to Boston & Maine 4, 1 to Boston & Maine 6, 1 to Boston & Albany 2. (13 min. Railroad - 5 min. Plant).
- 3:30 - 3:45 Went to Purifier 3, got 8 Bay State cars and 4 MT racks, weighed them, set 5 racks on shop spur, 4 MT's back to Purifier 3 to be loaded with breeze. (Plant).

3:45 - 3:55 Went to Purifier #1, got 11 MT Bay State racks, set 7 on new road track ready for battery. 4 set on odd side screenings track. (Plant).

Engine #3.

Tuesday morning, March 24, 1925.

8:00 - 8:27 Went to Power house, got 18 cars. 6 set on new road track. Picked up 3 ash cars to set. Switched 11 to Power house. Replaced one acid car. Went to new road got 5 Bay State cars - switched 5 to hole track, set 15 cars to Power house. (Plant).

8:27 - 8:37 Went to new road got 4 ash cars and 1 Bay State oil tank - set 4 in pocket, took tank and weighed, set on track C. (Plant).

8:37 - 8:58 Went to track 6 got 15 cars of coal (Plant work because one move was charged to railroad yesterday) and set to railroad tracks. (Plant).

8:58 - 9:15 Went to track 6 got 12 Boston & Maine and Boston & Albany, set 6 to railroad, 8 to storage track. (8 min. Railroad - 9 min. Plant).

9:15 - 9:30 Go to track 12 - get 14 Boston & Maine cars

of stock coal, set 9 to track 4, 3 to track 1, 2 to stock. (Plant).

9:30 - 9:35 Went to 12, switched 7 cars. (Plant).

9:35 - 9:47 Went to Boston & Maine shop track, got 18 repaired cars and set to tracks 9 and 11, 1 set back to shop. (Railroad).

9:47 - 9:54 Breaking up Railroad cars on 3rd Iron - 14 cars, 2 to shop, 12 to track 14. (Railroad).

9:54 - 10:14 Got 23 cars from 4th Iron, 18 cars to track 13, 3 to shop, 2 to Buckley. (Railroad).

10:14 - 10:24 Went to Chelsea track - got 19 Boston & Maine MT's and set on tracks 14 and 15. (10 min. Railroad).

10:24 - 10:45 Idle.

10:45 - 10:54 Went to Boston & Albany shop track, got 15 MT's and 1 tank and set. (Railroad).

10:54 - 11:50 Idle.

11:50 - 12:12 Making up cars for Railroad. (Railroad).

12:12 - 12:17 Went to Buckley got 6 tanks - 2 plus 1 to Railroad - 1 plus 2 to Plant. (3 min. Plant - 2 min. Railroad).

12:17 - 12:20 Set 3 cars to Buckley. (Railroad).

12:20 - 12:27 Got 6 tanks at Buckley, 1 back to Plant, picked up 1 box car, set it to Buckley, picked up 1 tank - 2 cars to steam shovel. (4 min. Railroad, 3 min. Plant).

- 12:27 - 12:32 Picked up 2 cars for Buckley, 5 resets.
(5 min. Railroad - 2 min. Plant).
- 12:32 - 12:36 Went to get 6 cars, 3 Railroad, 3 Plant.
(2 min. Plant - 2 min. Railroad).

Engine #4.

Tuesday afternoon, March 24, 1925.

- 1:05 - 1:28 Went to track C and picked up 15 Commonwealth tanks (6 to Railroad cars, 3 reach cars and set 6 back on track C). (15 min. Railroad - 8 min. Plant).
- 1:28 - 1:37 Went to storehouse track and got 7 tanks and 1 box car. Then went to Asphalt track and got 4 tanks. Sent 4 to Railroad. (5 min. Railroad - 4 min. Plant).
- 1:37 - 1:55 Went to track C and using 8 reach cars picked up 16 tanks. Switched 5 to Commonwealth and 7 back to C and set 4 to Commonwealth. Kept the 8 reach cars.
- 1:55 - 2:13 Went to rack got 14 cars. 2 of them to Boston & Albany, 2 to Boston & Maine track 3, 1 to track 1, 1 to Boston & Albany 4, 1 to Boston & Maine 3, 2 to track C, 1 to Railroad, 1 to runaround, 3 to Boston & Albany. (14 min. Railroad - 4 min. Plant).
- 2:13 - 2:26 Went to track A. Picked up 25 tanks, 4 to

- Commonwealth lead track, 21 back to track A.
(7 min. Railroad - 6 min. Plant).
- 2:26 - 2:37 Went on track C. got 10 tanks, put 4 to lead track in back of Commonwealth, 2 to track C. Set rest on Commonwealth rack tracks. (Railroad).
- 2:37 - 2:45 Got tank car from parkway weighed and set on amonia track. (Plant).
- 2:45 - 3:00 Got 15 cars from runaround track, switched 1 to Boston & Albany, 1 to Boston & Maine, 13 back to runaround. (15 min. Railroad).
- 3:00 - 3:13 Went to Commonwealth dump track and got 7 tanks, switched 6 out and 1 back. Took the 6 out to track A. (13 min. Plant).
- 3:13 - 3:36 Went to parkway. Got 9 MT tanks, 3 back on parkway, 6 on Commonwealth dump for repair. (23 min. Railroad).
- 3:36 - 3:45 Waiting for orders.
- 3:45 - 4:10 Went to Boston & Albany track 8 and got 5 cars of Everett Consolidated Gas coal and 7 cars of Everett Consolidated Gas coke, weighed and set to jerk 3. (25 min. Railroad).
- 4:10 - 4:25 Went on outside rack and got 1 tank, went on middle rack, got 12 tanks switched 4 to Railroad, 1 move to Railroad. (10 min. Railroad 5 min. Plant).

4:25 - 4:35 Sent back and reset 5 on Commonwealth,
Dropped 2, 1 to Railroad. (5 min. Plant
5 min. Railroad).

Engine #1 (This Engine is used mainly for
plant work).

Wednesday morning, March 25, 1925.

8:00 - 8:11 Went to Battery, got 1 Boston & Albany
and 8 Bay State loads and 5 MT's, set 8
loads to steam shovel, set 5 MT's back
to Battery and Boston & Albany. (11 min.
Plant).

8:11 - 8:30 Went to hole side of Battery, got 13 cars
8 loads set to steam shovel, set 5 MT's
back to hole track at Battery. (19 min.
Plant).

8:30 - 8:42 Went to steam shovel and got 16 loads
and weighed and set to crusher. (12 min.
Plant).

8:42 - 8:45 Shoved off 5 cars to Boston & Albany. (3
min. Railroad).

8:45 - 8:55 Went to Everett got 7 New Have MT's from
Boston & Albany #7, weighed and set to
crusher. (10 min. Railroad).

8:55 - 9:08 Went to jerk 8, got 14 MT Bay State racks
set 10 to new road track and 4 to holeside.

- 9:08 - 9:14 Went to jerk 3, picked up 3 Boston & Maine MT's (already had been set once) went to Grizzly and got 3 New Haven cars. (6 min. Plant).
- 9:14 - 9:20 Went to crusher, got 6 MT Bay State racks, set at Purifier track. (6 min. Plant).
- 9:20 - 9:30 Got 1 MT and 6 loads off jerk track, and set 7 to crusher.
- 9:30 - 9:45 Waiting for orders.
- 9:45 - 9:55 Picked and set 10 cars to jerk 8. (10 min. Plant).
- 9:55 - 10:15 Derailed car spent in putting back on track.
- 10:15 - 10:20 Went to jerk 8, got 6 Bay State racks and set to jerk 4. (5 min. Plant).
- 10:20 - 10:25 Went to jerk 7 for 5 Bay State racks and set to jerk 4. (5 min. Plant).
- 10:25 - 11:12 Dragging coke 5 cars, 2 New Haven cars and 3 Boston & Maine and set 4 to Purifier and 1 to jerk. (47 min. Plant).
- 11:12 - 12:00 Went to jerk 3 got MT Boston & Maine cars and set at awning to drag coke.