

Southern AURORA 69/1917/1917

I N Q U I S I T I O N

held at

C O R O N E R ' S   C O U R T   -   M E L B O U R N E

on

TUESDAY, 1ST JULY, 1969.

BEFORE:

H. W. PASCOE, ESQ., S.M.  
City Coroner.

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UPON THE BODIES OF -

JOHN BOWDEN  
LORNA NEWELL  
KATHLEEN VIDER  
DORIS MAY REDDICK  
NORA EVELYN NEWELL  
FREDERICK MCKENZIE  
ALLAN KEITH WILLSON  
MARY JOSEPHINE KING  
LAWRENCE NORMAN ROSEVEAR

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- MR. L. J. SMART was present to assist the Coroner.
- MR. A. AUGUSTINE appeared on behalf of the Victorian Railways Commissioners.
- MR. G. L. JONES appeared on behalf of William Frederick Wyer, Guard on Southern Aurora.
- MR. E. D. LLOYD appeared on behalf of M. G. Coulthard, Fireman on Southern Aurora.
- MR. F. CAREY appeared on behalf of the A.F.U.L.E.
- MR. N. COLBRAN appeared on behalf of A. Brendecke, Fireman on Goods Train.

69/1917

This inquest into the deaths of the nine people associated with the head-on collision between the "up" Southern Aurora and a "down" goods train at a point south of Violet Town Loop in the vicinity of the Dookie Road Level Crossing on the 7th February, 1969, has aroused more public interest than any inquest upon which I have adjudicated. Numerous letters from people in various walks of life have been received at this office, and all have been in the nature of attempting to be helpful and directed towards preventing a similar accident in the future.

The inquiry naturally developed into a review of the Railway System and its safety measures and comparisons with other systems were made.

Perhaps it would simplify matters if at the outset I express my opinion that on the 6th and 7th February 1969, no defect of a mechanical or inspectional nature caused this accident. I am satisfied that proper maintenance had been given the train, and that all essential components had been tested and inspected.

The next matter is the conduct of those responsible for the train while it was in motion and associated with this is the problem, "Was Driver Bowden alive at the time of impact?" I have no doubts that he died prior to the crash, was either dead or in a coma for an appreciable time, and that his death was occasioned by natural disease. I also believe that the onset of coma or death occurred even earlier than Counsel assisting me suggested it happened. For the next few minutes, it is my intention to devote my comments to this aspect.

Dr. J. H. McNamara, the Senior Government Pathologist stated that it was his opinion, and that this opinion was supported by other similarly qualified men, that Bowden had died before the crash, but that it was not possible to say how long he had been dead. However, when Dr. McNamara said "It was not possible" he was referring to his own particular field of expertise and not to other aids from which assistance may be sought to determine such a matter.

Mr. George Frederick Woolley, Engineer of the Victorian Railways Commission stated "the speed of the line since opening has been fixed at a maximum of 70 m.p.h. This speed limit is published in North Eastern District Working Time Table and speed charts fitted to locomotives are examined to ensure drivers comply with speed limitations both of a general and special nature."

I have examined this publication, and at page 154 it states -

- "1. The MAXIMUM speed is the HIGHEST SPEED ALLOWED on any portion of the line.
2. SPEED OF TRAINS - It must be clearly understood by Enginemen, Electric Train Drivers, Rail Motor Drivers, and Guards, that the maximum permissible speed authorized for the line and for the type of train must not, under any circumstances, be exceeded over any portion of the journey....."

That is the end of that particular section I am quoting.

Then in Clauses 8 and 9 are set out the maximum speeds and these vary between 20 m.p.h. and 70 m.p.h.

Clause 169 of the Victorian Railways Rules and Regulations Manual provides "The Driver must regulate the running of his train so as to complete each section in the minimum time practicable subject to the authorised speeds not being exceeded.....". On the third day of the hearing, Mr. John William Stirling, Assistant Superintendent of Locomotive Running produced speed charts of previous runs of the train in the vicinity of the signals and loop and when the Automatic Signal and the Home Approach Signal were in a similar aspect to the signals on the morning of the crash. One of the charts was of the deceased Bowden on an occasion on the 3rd May, 1968; two of the charts applied to a Driver Cowan on the 19th October, 1968, and the 15th January, 1969, and the other applied to a Driver Sparks on the 24th January, 1969.

At a point a little more than two miles on the approach side of the Automatic Signal, Driver Cowan and Driver Sparks each reached a speed of 70 m.p.h. on the 19th October 1968 and 24th January 1969 respectively, and on the 15th January 1969, Driver Cowan reached 68 m.p.h. At about the same place, deceased Bowden on the 3rd May 1968 reached just over 70 m.p.h., but all dropped down to 66 (approximately) m.p.h. at an adverse gradient some one and a half miles on the approach side of the Automatic Signal, and all passed that signal at less than 70 m.p.h.

However, if the speed chart of deceased of the 7th February last is perused, it will be seen that shortly after passing the point where he and other drivers have previously observed the speed limit, he exceeds such limit to a degree that he and other drivers have not exceeded before. At the adverse gradient already referred to the trace understandably drops to below 70 m.p.h., then increases speed to more than 70 m.p.h. on the favourable gradient and generally maintains this speed through the Automatic Signal, dropping down to 70 miles per hour at the Home Arrival Signal - this is because there is an adverse gradient there - and on the complementary favourable gradient, building up speed to 72 or 73 miles per hour. A draughtsman of the Victorian Railways combined these charts into one diagramatic form for me and added a track gradient, signals and, for good measure, one other chart that was not mentioned at the hearing - viz. that of Driver Lynch on the 27th March, 1969. This was the reproduction of the chart on the morning I travelled in the locomotive of the Aurora. This diagram, which I am adding as part of my finding, shows that the obvious lack of reactions is not in accordance with the skill and reputation of a man like Driver Bowden and I am satisfied that he was dead or in a coma at least six miles on the down side of the site of the crash. It is quite feasible that he was not in control of the train when at some point further away than six miles. The speed chart shows that the train was in control between the Glenrowan Loop and the Benalla Loop - this part of the track has a 60 miles per hour limit, has a downhill gradient and the tracing on the chart shows that it was within the limits of 60 m.p.h. Leaving this area, the driver could take ill and the undulating nature of the gradients would control the speed of the train, making it impossible to formulate any positive deductions that the train was not in control of the driver at a greater distance than six miles. This is a suitable occasion to review the medical background of Driver Bowden and determine whether or not any adverse criticism can be directed towards him. Dr. Frank John Grant of Wodonga had been Bowden's medical practitioner since 1953, but it was only from 1963 onwards that there was any frequency in visits and this was because the patient had hypertension. Dr. Grant detailed the dates and aspects of the visits and it is apparent that there had been fluctuations taking his readings often well outside normal limits, but this

appears to be when he had not been adhering to his medication and diet.

In October 1967 the medical records show him as "suffering from Angina Pectoris" which is a symptom of Coronary Ischaemia. Doctor and patient discussed this condition in relation to employment, and Dr. Grant testified, "I asked him what would happen if he dropped dead at the controls. He already knew that what he was suffering from was going to kill him because his mother died at about the same age and about the same condition, and he knew once he developed this condition that he was going to die."

It would appear from the evidence of Dr. Grant that the last time Bowden was seen by him regarding his hypertension was May 1968 and the last visit for any condition was June 1968 for conjunctivitis. This is not totally in accordance with the list of medication supplied by the chemist, James Roger Pope trading as J. McSwiney and Company. On the 9th June, 1968, he supplied Chloromycetin Eye Drops and Chloromycetin Eye Ointment - obviously for the condition of conjunctivitis - but then ten days later, he supplied "100 Slow K Tablets. On new prescription" and it is fair to assume that if Bowden had received a prescription for eye medication and at the same time, a prescription for Slow K Tablets which are supplements to Hygroton, a tablet prescribed for hypertension, he would hardly wait ten days before presenting the second prescription to be filled by the chemist, so it is possible that the last time Bowden was checked by his medical practitioner was on or about the 19th June, 1968, and this is quite likely, as he had to undergo a Railways medical examination the following day and would naturally be interested in his condition.

I feel that some criticism of the medical staff of the Victorian Railways is warranted for a physical examination of an employee which to me is not in accordance with the standards of care that should be exercised for a man who is to be in charge of an express train carrying approximately 190 people at speeds up to 70 miles per hour. The high incidence of heart disease in our community is well known - it is often referred to as "The No. 1 Killer" - and its incidence in certain age groups is also known, and I do not consider that the medical staff have sufficiently policed all the features that convert the assessment that a man is hale and hearty to a comprehension of what he really is, namely an ill person.

During the hearing of the medical evidence of Dr. Ackland I wrote down on my notes,

"Apparently Medical Officers regard too highly the statement of a driver, 'I am feeling well'."

and after reading the transcript several times I still consider it a valid criticism, particularly in view of his statement, "I tend to find if it is the livelihood of a man depending upon it he will not tell the truth."

Summing up the medical aspects of the hearing and the behaviour associated therewith, although I have found that the medical staff of the Railways warrant criticism, the real blame is attached to Driver Bowden for continuing a responsibility he was not physically well enough to perform. He was extremely negligent in persisting in driving what might well be called our prestige train knowing that he was a candidate for death at any moment and in effect admitting that if death did overtake him on the train, the safety of the passengers, crew and

equipment would depend upon the fireman pulling up the train.

It is logical now to consider the other control personnel of the Aurora, and I intend to assess the role played by Mervyn George Coulthard. As I have found that Driver Bowden died at the latest, some six miles prior to the crash, the corollary is that the evidence given about an alleged monosyllabic reply by the driver relative to the making of a cup of tea cannot be correct. I have no reason to doubt Coulthard's agreement with Mr. Lloyd of Counsel that Bowden was a skilful driver with a reputation of being reliable and steady, but acknowledging this makes Coulthard's actions incomprehensible, because when this steady and reliable driver was (apparently) acting in an unusual fashion by travelling at a speed which was prohibited under any circumstances but in this case was aggravated by passing a Caution Automatic Signal, and had made no attempt to implement what that signal connoted, he pressed the vigilance control and left the cabin to fill the kettle. He did this at a time when other drivers (including Bowden on a prior trip) had slackened speed by at least ten miles per hour, and at a time when he (Coulthard) knew there were other signals "coming up" and that it was his duty to observe.

In this instance, the driver was not able to consent to it because death had claimed him, but it is apparent that this was a practice which had been acquiesced in in the past; it may be that Bowden was the only driver who permitted it - it may well be a general practice amongst drivers.

I hold the belief that when the train went through the home departure signal and moved the points and bent the controls thereto that a person sensitive to his job would have noticed this unusual event, but Coulthard stated he could not recall any. As he was insensible to the other unusual circumstances which existed this day, perhaps this is only another insensitivity.

In reply to Mr. Coldham's question, "Why go down and perform some other duty when you have the duty of observing signals and are within the signals system of a loop area?" Coulthard's reply, "The driver in charge of the train was in my opinion quite competent to handle this train, and the fact that he is employed in this position, and I considered the man competent to do this and I did not have any doubt in him not being able to do it" indicates that he regards himself as filling the role of a supernumerary, not the role envisaged in Clause 168 of the Victorian Railways Rules and Regulations, which states:-

"(a) The Fireman must keep a good look-out for signals when not necessarily otherwise engaged, and must promptly assure himself that the Driver is aware of the indications thereby exhibited.

As far as practicable,"

and the emphasis is mine

"the Fireman must be disengaged when approaching or passing a Station, Signal-box or Junction so that he may keep a good look-out for Signals."

Coulthard was not the only person who considered that all he had to do was to be physically present on the train. The guard, William Frederick Wyer was such another. His log book was largely a piece of fiction, and I am satisfied that he was asleep shortly after clearing Albury. This

naturally gives rise to a comment in the form of a question, "Is this the usual procedure for the guard?" - I have called this a comment because I do not expect to receive any valid reply to the question.

Train guards know the features of the track on which they travel and they anticipate the approach of signals. On the trips I made in the vans, the guards knowing that I wished to view the signals were able to advise me of the approach to signals without needing to look into the viewer to see that they were in fact "coming up". Wyer admits that the first signal of the Violet Town Loop that he saw was the Home Arrival Signal. He did not see the Automatic Signal some two and one-third miles before. He did not see any yellow light on the signal he claims he "observed" but because he saw this signal when the front of the train had already passed it, a red at that stage would be in order. However, this adds up to the fact that he did not observe the train approaching this signal. When he observed that the Home Departure Signal was on red he knew that "something was wrong" but he waited for the loco crew to take action and then he claims he eventually took action which was to put on the brake immediately before the impact. One Leslie Charles Goodsell, a Head Conductor of the New South Wales Railways and a person who had been a conductor "since the early 1940's" gave evidence that immediately before the impact, he "felt what I thought was a full emergency application of the air brakes accompanied by a severe jolt." A passenger, John Walter Trewhella stated, "The first I knew of the collision was the brakes coming on, but almost immediately after this the collision occurred but the brakes of the train were applied before the collision," and his wife Daphne Fay Trewhella claimed, "I heard the brakes being applied, there appeared to be no time at all between this and the crash."

Another conductor, John Thomas Howlett of New South Wales claims that he "felt the brakes applied in which I considered was an emergency application. Almost immediately after this I felt three or four heavy bumps."

On the other hand, David John Freeland, a conductor of the Victorian Railways who has had 33 years' experience in this field of employment is adamant that "Up to the point of impact I did not feel any brake applications nor did I feel any reduction in the speed."

However, locomotive driver Henry John Dawe testified that after the crash when he hooked up his engine to the guard's van and six carriages of the Aurora he "heard an air blow which indicated to me that the tap was probably open in the guard's van allowing the air to escape", and another engine driver, Jack Bertrand Manning testified that when Dawe informed him that he had lost his air pressure, he (Manning) climbed into the guard's compartment of the Aurora van and found the air tap in the full open position and closed it.

I am therefore justified in finding that Wyer did operate the brake cock, but of course it was operated far too tardily to be effective. He failed to comply with Regulation 199 (b) of the Regulations which state,

(Page 7 follows)

"When starting from or approaching stations, or when approaching Fixed Signals or other places where extra vigilance is required, or when passing Signal-boxes, the Guard must keep a good look-out and take any action that may be necessary. He must also keep a good look-out on other parts of the journey when not engaged with other necessary duties",

and therefore as both Coulthard and he breached their duty they must also share the responsibility for the loss of trains and eight lives.

Regarding the crew of the goods train - my only comment is that they were proceeding in accordance with signal aspects and when the impending disaster became apparent, there was nothing they could usefully do to avert it.

A somewhat similar comment applies to the personnel of the Train Control Branch of the Signalling Section. They were 105 miles away and other than alerting officials of various sections and departments that an emergency situation had developed, there was little of a real practical nature that could be done in this instance.

In summing up the roles that railway personnel played in this multiple tragedy, I have already expressed my opinion of the negligence of the driver, and have no hesitation in stating that the Fireman and the Guard were also negligent in the non-performance of their duties. Once the driver was dead, it only needed one of the two surviving crew to be attentive to his duty, and this accident would never have happened. If the fireman had been alert or the guard had been awake, I feel that the train would have been pulled up in ample time to avoid the collision, and I am going to take advantage of my position by reminding this Court that this condition of alertness and wakefulness was what these men were paid for and this condition was one which the remainder of the train personnel and the passengers had every right to confidently expect.

I have naturally given much thought as to whether I should commit Coulthard and Wyer for trial on a charge of manslaughter, but while I say that they were extremely negligent, I am not prepared to attach to them the epithets of "Culpable", "criminal", "gross", "wicked", "clear" or "complete" mentioned in the famous (and confusing) case of *Andrews v. Director of Public Prosecutions* and therefore content myself with a misadventure finding in the case of the deaths of the eight victims.

Having thus established the formal aspects of my findings, I now turn to the recommendations to prevent the re-occurrence of such an event. During the consideration of the medical aspects of the driver, I criticised the Departmental Medical examination as was existent up to the time of this disaster. Dr. Ackland informed the Court that there had now been instituted a system whereby drivers will be medically examined every two years in lieu of five and that the "examination form had been altered so that it allows more detail for examination. There is a questionnaire on the back which inquires into any car accidents, head injuries, operations, sickness within the last two years and also asks whether the person is taking tablets of any nature prescribed by the doctor, how often and for what."

Admittedly, this is quite an advance, but it does not represent enough departmental progress. I adopt the recommendations of Dr. Alan James Goble, a cardiologist at the Heart Foundation that all men with the responsibility of a driver be given an annual medical examination with standards equivalent

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Having thus established the formal aspects of my findings, I now turn to the recommendations to prevent the re-occurrence of such an event. During the consideration of the medical aspects of the driver, I criticised the Departmental Medical examination as was existent up to the time of this disaster. Dr. Ackland informed the Court that there had now been instituted a system whereby drivers will be medically examined every two years in lieu of five and that the "examination form had been altered so that it allows more detail for examination. There is a questionnaire on the back which inquires into any car accidents, head injuries, operations, sickness within the last two years and also asks whether the person is taking tablets of any nature prescribed by the doctor, how often and for what."

Admittedly, this is quite an advance, but it does not represent enough departmental progress. I adopt the recommendations of Dr. Alan James Goble, a cardiologist at the Heart Foundation that all men with the responsibility of a driver be given an annual medical examination with standards equivalent

to Life Assurance organisations; that in the event of the finding of variations outside those limits, particularly with reference to the cardio-vascular system the driver be referred to a specialist in that field for his opinion regarding prognosis, life expectancy, treatment and fitness to drive, and finally, that each driver have an electrocardiogram every two years.

Another avenue for reform is the guard's van. This must be converted from an unofficial sleeping quarter to a van containing an alert and responsible officer fulfilling the duties for which he is paid. I would therefore suggest that he be supplied with a Vigilance Control button to press at regular intervals, that the releases of such control be automatically recorded and that the chart of the recordings be subjected to scrutiny in a similar manner to the speed chart in the driving compartment.

Anticipating a protest that at certain times such as entering and leaving stations and yards the guard has to move around and could be detained away from the control button, I suggest that an experienced officer be asked to nominate the usual places at which a guard positions himself and that a button be placed at each of those situations.

As the Working Time Table (referred to by me earlier) requires the guard to police the observance of the permissible speeds, I recommend that a speedometer be added to the equipment of the van. This speedometer could be a "repeater" from the speedometer in the driving compartment, but I consider it would be easier and cheaper to have the drive from a unit off an axle of the van. There should also be better equipment in the van. For one thing, the viewing mirrors on the sides are awkwardly placed, excepting for men of short stature. When I travelled in the van as an observer, I had to assume a crouched position to use these mirrors, and if photographs 8 and 9 of Book 3 - Exhibit "L" - are examined, it will be seen that the unit is quite an appreciable amount below eye level of the Senior Detective who posed for the photograph. If men are to be encouraged to comply with Clause 199(a) of the Rules and Regulations, the equipment they require should be conveniently situated.

I have a presentiment that it was expected that I would recommend the abolition of the side viewing mirrors, but I believe that they are necessary for the purpose of looking along the sides of the trains for "hot boxes" on the axles and for other events that could warrant the train being brought to a standstill.

Replying to a question directed to him by Counsel assisting me, the Chief Mechanical Engineer, Mr. Stanley Francis Keane, stated that the "periscope" type of viewer was being done away with. I say quite fervently, "I hope not." I travelled in the van of the Spirit of Progress which is fitted with this device and to observe the "approaching" signals was much easier and much more convenient than in the side viewer of the Aurora.

Mr. Keane stated "We cannot put this periscope - if we go to the maximum with the freight vehicle we would go above that with the periscope and we conflict with the clearance diagram". I disagree. Fourteen feet is the maximum height from rail level that our trains can attain without causing alterations to be made to bridges, overhead equipment etc., and this is the height of the locomotive. The carriages and baggage van are 13 feet 3-3/8 inches in height - by simple arithmetic 8-5/8 inches can be added to the van without conflicting with the clearance diagram, and most of this

8-5/8 inches could be utilised as the viewing aperture of the periscope. With this amount of space, and perhaps assisted by optical type glass, I express the hope that periscope viewers will be fitted to the current Southern Aurora trains, and that they be supplementary to the existing side viewers.

This survey now moves forward to the locomotive, where more revolutionary changes must be effected. Exhibit "HH" was Descriptive Publication C104 issued by Westinghouse Brake (Australasia) Pty. Ltd. on one of its products called, "Type R3 Pneumatic Vigilance Control System with Audible and Emergency Warning" and it is this device with which the Aurora was fitted.

The first paragraph of the Publication states -

"This Vigilance Control System is operated pneumatically, and is intended to confirm that the driver of a locomotive or train is alert at all times the locomotive or train is in motion. It cannot be rendered ineffective by irregular operation of the acknowledgment valve, and requires a re-setting operation at regular intervals to avoid an emergency warning being given by a loud-sounding horn or whistle."

The publication then continues to supply semi-technical information and in the fifth paragraph states -

"Where an observer is stationed in the cabin addition to the driver, the system can be arranged to be acknowledged by either man."

In view of the last-quoted paragraph, it is obvious that the first quoted paragraph was intended to refer to a one-man controlled locomotive and the whole import of it was to see that the driver remained awake, because "loud-sounding horn or whistle" is useless if the non-vigilance is caused by sickness, coma or death. The provisions of the fifth paragraph (already quoted) were implemented by the Victorian Railways to obviate this defect in the system, and the responsibility of the general operation of the control was given to the fireman. This resulted in a cumulative effect of the control keeping the Fireman awake who in turn had the responsibility of seeing that the Driver was awake. I suppose that conversely, if the Fireman was not awake and alert, the "loud-sounding horn or whistle" would convey to the Driver that everything was not as it should be with his fellow workman, and so action would be taken to see that two pairs of eyes in the locomotive were being utilized to secure the safety of the passengers and train behind.

This appeared to be a good system until the 7th of February, 1969 when the combination of a dead driver, an insensitive fireman and a somnolent guard caused this multiple tragedy. It is not a combination that anyone could be expected to foresee, but hind-sight has shown that in its present operation, the current mechanical device cannot overcome human neglect. In broad terms, this means that the train must be fitted with a device that depends on the inter-action of the two men in the cabin, and if that inter-action fails through sickness, sleep or other interference, the train will be brought to a stop automatically. It is on this aspect that I finally comment:-

Quite a number of letters received at this office mentioned "dead man's handle", "dead man's grip" and terminology referring to a system whereby the driver keeps pressure on a lever or trigger-like device, and if this pressure is totally relaxed due to sickness, death etc., the train is

brought to an automatic halt. This is quite effective in our suburban electric trains where stops are frequent, but to ask a driver to keep a pressure up for four hours could make working conditions intolerable and would I believe lead to a conspiracy between the two crew men to circumvent it.

Much of the final day of the hearing was taken up with evidence relating to systems and devices for the control of trains. Evidence was heard of the Trip System, the Ramp System, the Inductive Type Intermittent Automatic Control, the Inductive Type Continuous Automatic Train Control, and a sensory device under the trade name of "Alertor 65."

It is not my intention to laboriously traverse these systems as they are described in the transcript and in addition as part of the office file, I have descriptive publications and data on the Inductive-Type Automatic Train Control and the Sensory "Alertor 65" which are available to anyone who is interested in perusing them, but briefly, the Trip System is suitable only for comparatively slow suburban rail traffic, the Ramp System, which is a modification of the Trip System is being superseded in England, the Automatic Control Systems are by world standards only used in railways of 80 m. p. h. or more (it has already been mentioned that our maximum speed is 70 m. p. h.) and the Sensory Device it was believed could be interfered with and so register a situation which did not in fact exist.

From the evidence tendered, I am satisfied that human neglect caused this accident, that it is not necessary to instal inductive type Automatic Train Control systems, and that according to world standards, it would only be necessary if we materially increased the maximum speed of our trains.

Mr. Keane told the Court of a modification of the existing Vigilance Control equipment which was then being tested. I later went on a Goods Train fitted with this device and saw several applications of it and was greatly impressed by it. Under this system, the fireman and the driver press the vigilance control alternatively. Firstly, the fireman presses his control button and a special control button with a light beneath it situated on the driver's console becomes illuminated, and at the same time an electrical buzzer sounds, thus the driver has visual as well as audible warning that it is his turn to press his control. When the driver presses his control, the light is extinguished and the buzzer ceases to sound. It then becomes the turn of the fireman to operate the Vigilance Control, and so continuously, the duty of control alternates between one and the other, each pressing his control button approximately at 90 seconds intervals. The device is so mechanically constructed, that once the button on the driver's console is illuminated and the buzzer sounds, the fireman cannot by operating his own control prevent the blow of air, only pressure on the driver's control button will do this.

In the event of the crew members not carrying out their vigilance control duties, the driver's visual and audible warnings will occur, followed by a blow of air in the cab for 15 to 25 seconds. A high pitched warning siren will sound in the cab for 10 seconds followed immediately by a simultaneous cut off of engine power and an emergency application of the train brakes.

Since I went as an observer on a demonstration run, a means of recording on the speed chart each pressing of each individual control button has been achieved, and whereas on the trip I made, the automatic application of emergency braking had

to be supplemented by a certain amount of manual control, I am informed that total automatic emergency braking application has now been achieved. Whilst on this trip, several possible ways of circumvention of the device were tried by me but none were successful, due to time relays incorporated in the mechanism - the control actions had to be slavishly performed.

I believe that if this modification is adopted, the existing pneumatic vigilance control button on the driving side of the locomotive will be removed, and that consideration is being given to reducing to 10 seconds the warning blow of air in the locomotive which currently is 15 to 25 seconds.

I congratulate those who have been responsible for the modifications to the vigilance control, I regret greatly the events which made this initiative imperative, and recommend the adoption of this device in passenger trains.

My formal findings are :-

- (1) On the 7th day of February, 1969 on a railway track between Benalla and Violet Town

John Bowden

died from natural disease, namely Cardiac Failure following Coronary Atherosclerosis and Myocardial Degeneration.

- (2) On the 7th day of February, 1969 at Violet Town,

- (1) May Josephine King
- (2) Frederick Joseph McKenzie
- (3) Lorna Elizabeth Newell
- (4) Nora Evelyn Newell
- (5) Doris Lilly Mary Reddick
- (6) Kathleen Mary Vider
- (7) Allan Keith Willson

each died from the effects of injuries then and there received when a railway train in which they were passengers and which was travelling from Sydney to Melbourne, failed to comply with adverse signals and collided with a goods train travelling in the opposite direction, and I further find that such deaths were caused by misadventure.

- Finally, (3) On the 7th day of February, 1969 at Violet Town

Lawrence Norman Rosevear

died from the effects of injuries, burning and the inhalation of carbon monoxide gas when a goods train he was driving from Melbourne to Albury collided with a passenger train travelling in the opposite direction and which had failed to comply with adverse signals, causing fire in the resultant wreckage, and I further say that such death was caused by misadventure.

In respect to what we might term the physical exhibits, I order that Exhibit "S", that is the travelling clock and ring of keys be returned to the relatives of Rosevear; Exhibit "T", are also the private possessions of Driver Bowden and are to be returned to his relatives; Exhibit "V", a bottle which originally contained Anginine Tablets, may be returned to the relatives.

The small exhibits which are suitable for filing at the Registrar's Office, I order be retained as part of the file, and the large exhibits I order be retained in custody by the Railways Department.

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