MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION
SFN 2053 (2/85) 5M

ROLL NUMBER

DESCRIPTION

3064

The micrographic images on this film are accurate reproduct ns of records delivered to Modern Information Systems for microfilming and were filmed in the regular course of business. The photogr hic process meets standards of the American National Standards Institute (ANSI) for archival microfilm. NOTICE: If the filmed image above is less legible than this Notice, it is due to the quality of the document being filmed.

LaCosta Rickford 10/16/03
Operator's Signature Date

2003 HOUSE TRANSPORTATION

HCR 3064

2003 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HCR 3064

House Transportation Committee

☐ Conference Committee

Hearing Date February 27, 2003

Tape Number	Side A	Side B	Meter #
1		x	8.4 to end
2	x		0.1 to 6.5
Committee Clerk Signature	Lawsun L. Ford		

Minutes:

Rep. Weisz, Chairman opened the hearing of HCR 3064, a concurrent resolution directing the Legislative Council to study the use of remote-controlled locomotives and related safety and security.

Rep. Delmore: Representing District 43, Grand Forks spoke a sponsor for this legislation. She presented this as safety issue. She pointed out that these remote controlled locomotives are used in Minot, Mandan, Grand Forks and the Fargo - Dilworth area. I look at the University of North Dakota right along the railroad tracks; I understand that in Mandan a trailer court is located very close to the railroad tracks and there is no engineer in control of the train. I do understand that technology has moved along but I think we need to be careful what we do with that. The safety of our citizens is paramount -- there is hazardous material that is moved through here and what happened in Minot --- I am concerned about this and I think we need to study this and find out how they work.

Richard Olson: Representing the Brotherhood of Locomotive Engineers testified for the need for this study. A copy of his testimony is attached.

Rep. Weisz: (16.9) Are these RCls used strictly in the yards?

Richard Olson: No they are not.

Rep. Weisz: are they used on the tracks from here to Fargo?

Richard Olson: At the present time Federal law is unclear about it. The final rule making isn't done yet -- so far none of the railroads are using for any distances -- I would say not more than 4 or 5 miles.

Rep. Ruby: You mentioned the accidents with these RCLs -- within the past year have there been any accidents?

Richard Olson: You mean within the state of North Dakota -- yes there have -- as I tried to explain there have been accidents but not injuries have occurred. The reason some of this hasn't been reported is that the guidelines say that if the damage is less than $6700 and there has been no injury it need not be reported. We have been fortunate because we have had numerous accidents but no injuries. They just haven't reached the threshold of $6700 -- that isn't to say that they didn't -- that is up the determination of the railroad. If they say the car is worth $10 or is they use used parts -- so whose to say.

Rep. Ruby: What about those (locomotives) where there is an engineer in the trains -- have there been accidents there too? in the last year -- reportable and non-reportable?

Richard Olson: yes .

Rep. Thorpe: On those over the road -- are those manually operated or is there a computer system ---

Richard Olson: Yes there are computers on board that control the functions of the engine but the engine controls the train.

Ron Huff: Representing the Brotherhood of Locomotive engineers. His testimony is attached. He also had some written testimony to present for Mike Muscha who could not be present. A copy of that testimony is also attached. He said they recognize that technology is here but they don't openly endorse it because it does cost them jobs.

Rep. Ruby: I know that some reference to the Minot accident -- I just want to point out that the investigation isn't completed but there was an engineer on board -- so accidents can happen with someone in control but there are such things as broken rails, etc.

Rep. Weiler: What is the per centage of remote controlled versus --

Ron Huff: in Mandan ? Before we started the remote controlled switch engines we had 2 switch engines manned by a 3 man crew. Now we are down to 1 - 3 man crew switch engine and 1 remote controlled switch engine per shift. So it was 6 to 1 now it is 3 to 1.

Richard Olson: To explain the Mandan operation -- everything that is done in the yards is by remote control -- we have two conventional locomotives that are assigned to go to Bismarck that are that are further out but all the duties in the yard are remote controlled.

Ron Hufff: Now for my testimony -- the previous for Mr. Muscha. As stated above Ron Huff's testimony in written for is attached .

Rep. Ruby: Is the operator always on the ground or are they up in the tower where the can see?

Ron Huff: Speaking for in Mandan -- the are on the ground -- there is no tower. They are about a quarter mile away and can't always see.

Rep. Thorpe: On these RCLs -- do they have any kind of sensors on the front of the engines that would cause them to stop under certain situations?

Ron Huff: I am not aware of any.

Opposition:

Dan Kuntz: Representing the Sante Fe Burlington Northern Railroad. He asked that Brian Sweeney, legal counsel and Jerry Suko, Locomotive Engineer be permitted to present their testimony.

Brian Sweeney: He hand out informational papers to support his statements. These are attached. His statements began with saying that this technology is not really that new and that it certainly wasn't rushed into over night. It had been studied by the Federal Railroad agencies in government and that the Canadians had used this technology for more than ten years before it was used here. They proved it was safe. Canadian statistics show that accidents were down 44% and injuries down more than half. In the sates it is being phased in. The National Transportation Union directives require automotive emergency stops and shut down. These are not Lionel Trains. They are not a road service. they are opposed to this study as it has already been studied by the National Railroad Administration. Safe guards like 10 mile per hour top speeds, crossing protections, if the operator tilts at 45 degrees the train shuts down, if some body falls or is injured the train doesn't just take off -- it takes two separate actions to make an engine move. There are training and certification guidelines -- it is the same body that certifies railroad engineers, their operating rules are filed with the Federal Railroad Administration -- they have had no incidents related to the use of this technology. Mr. Suko is certifies as a locomotive engineer and also certified in the use of this equipment.

Rep. Weisz: Can you address the issue of safety of going through a trailer court -- or /

Brian Sweeney: Mr. Suko can answer better than my answer but when we cross a road crossing there is a guard there and into between crossings you have the same problems as you have now -- this is if they can't see from the front or from the rear of the trains it is the same as now -- I don't see any difference.

Rep. Delmore: I have not seen the statistics from Canada and I am wondering if the compare apples to apples and orange to oranges ?

Brian Sweeney: Those bar graphs show side by side comparisons for each and all types of accidents.

Rep. Delmore: One of the other things is in light of what happened in our country on 911, would these types devises be more open to someone to be able to get into the yard and take control of the train?

Brian Sweeney: There is no greater risk -- in fact I was going to comment on this and Mr. Suko will address it also -- When you put the locomotive into remote control there is a devise you insert into the locomotive -- if some one gets on the locomotive and pulls that out and tries to take control of the train the remains in neutral. this is because the only one who can activate or deactivate that is the person who initiated it with his belt pack. It is no greater than now is someone could get on and overpower a person who may be on board. It is arguably lees chance.

Rep. Thorpe : (45.4) In the interest of safety -- I am wondering why the companies decide to contract with the UT instead of the BLE? There seems to be a vast difference in the training they receive.

Brian Sweeney: WE discussions with both Unions and we could come to an understanding with only one of them. The BLE did file an arbitration action in an attempt to keep the work with the BLE. the arbitrators decision said it was a very different thing operating a train over the road in the mountains and different terrain -- varying train weights, etc. than in switching operations.

Rep. Weiler: Whether some body is operating the train or not -- it comes to a crossing and there happens to be somebody driving or -- at the top speed of ten miles per hour -- what's the -- or how much time does it take to stop the train?

Brian Sweeney: Mr. Suko can answer something that technical -- I know just enough to say that depends-- it would depend on the number of cars and the weight of those cars loaded, etc.

Rep. Delmore: these are not use on pedestrian trains -- or hazardous waste trains ?

Brian Sweeney: These are just switching operations. If it is hazardous materials --- that would come under the federal definitions -- they are always switched in the same locations and those other jurisdictions who have used this longer say it is a safer way to do this.

Rep. Delmore: Have no other states looked into these remote control devises -- have they done studios like this?

Brian Sweeney: I am not aware of any states who have studied it -- the feds have extensively.

Rep. Headland: You testified that this doesn't need to need to be studied but wouldn't the railroad employees and the people of North Dakota would feel better if they knew that we had studied.

Brian Sweeney It was the industry but the Federal Government that studied this -- there was a lot of thought that went into this --it isn't that we are afraid of the study but what people might try to turn it into -- today some of the things that we say show that we did have to here to make sure

that the information gets out because certain things said in a different context sound differently.

The rail industry does have a good safety record. In the 20 years I have been with the industry the accidents have dropped well in excess of 50%.

End of Tape -- Go to Tape 2 side A.

Jerry Suko: Train Master, Mandan, North Dakota. He is certified locomotive engineer and a certified remote control operator for the past 5 years. He has a total of 25 years with the railroads. In Madan they use remote control for switching -- they confine that to the switching yard itself except they do go north to the Hesket Power Plant 2 miles and to Sunny Industry located 2 miles west of Mandan. On the west there are two crossings involved and those are protected by gates. the individuals who operate these remote control have gone through their training and they are observed during their training process by himself and other officers who are remote control trained to insure that they are complying with safety rules and regs. Their concerns are always with safety. We have had some incidents with remote controlled trains but nothing to do with the remote control equipment itself. In most case it is a human factor where we did not get a cut o cars where we thought we would, -- we have had the same exact type of thing with trains with humans controlling the trains. As our people use them -- the more proficient you become. As for the trailer court situation -- we go through there every day as do the trains with engineers aboard and have exactly the same situation where we have blind spots where neither of them can see the length of the train. We do use utility people in the yards to go ahead when a ground controller can't see -- they make sure that no one is in front of the train -- as far as making sure that no one will ever run across the path of the train -- it is never going to happen. We do have protection as to where we park our locomotives -- we do have derails -- there are other rule that say if you are

going to leave a locomotive unattended, it must be attached to other equipment -- with hand breaks or a cut of cars -- as far as some one getting on the train and attempt to get control of it -- the first thing the locomotive would go into an emergency stance and could not be started or got going unless that person had the knowledge to get it started. there is a remote control devise that goes in to put in a reverser -- the independent is cutout and the air brake is cut out -- everything is control by the remote controller -- all this has to be reversed -- the computer send a signal the belt pack every 500th of a millisecond -- this signal is sent back and forth to make sure they are in communication with one another. -- In 3 second if you do not respond -- it will automatically place the system into emergency. -- If you or your friend have heart attack and communication is interrupted -- emergency is activated into a shut down. If the one who causes the operation interrupt -- and his partner wants to take over he can not -- the one who caused the interrupt must correct it -- with his equipment. As far as the safety devises and being familiar with both stems I feel we are operating more safely now than ever before.

Rep. Delmore: Do you think the training that is done with these remote control devises is adequate -- is as good as the training had been previously?

Jerry Suko: I believe that the FRA is sufficient for what they doing but to go out with a 100 car trains over the road -- absolutely not.

Rep. Delmore: Would you say there is still a human factor?

Jerry. Suko: Yes there will always be a human factor no matter what you do.

Rep. Weisz: In those two miles up north or out west where is the remote operator?

Jerry Suko: The operator the can ride inside the cab but they can operate the train from inside of the cab -- they must step outside to do that.

There being no other persons wishing to testify either for or against HCR 3064, Chairman Weisz closed the hearing.

End of hearing record (7.4) .

Action on HCR 3064 -

Rep. Delmore: I did not know that the rail accident in Minot was with a manned train until today. I still believe though there is merit in the study.

Rep. Bernstein moved a 'Do pass motion and to place on the consent calendar' motion for HCR 3064.

Rep Hawken: seconded the motion. On a roll call vote the motion carried 10 **Ayes** 0 **Nays** 3 **Absent and not voting.**

Rep. Delmore was designated to carry HCR 3064 on the floor.

End of record.

Date: 2/27/03
Roll Call Vote #: 1

2003 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3064

House **TRANSPORTATION** Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number 33109.0100

Action Taken Do Pass on placed on Consent Calendar

Motion Made By Rep Boe Seconded By Rep Ht

Representatives	Yes	No	Representatives	Yes	No
Robin Weisz - Chairman	✓		Lois Delmore	✓	
Kathy Hawken - Vice Chairman	✓		Arlo E. Schmidt	✓	
LeRoy G. Bernstein	✓		Elwood Thorpe	✓	
Mark A. Dosch	✓		Steven L. Zaiser	✓	
Pat Galvin	✓				
Craig Headland	✓				
Clara Sue Price	✓				
Dan J. Ruby	✓				
Dave Weiler	✓				

Total Yes 10 No 0

Absent 3

Floor Assignment Rep. Delmore

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
February 27, 2003 2:24 p.m.

Module No: HR-35-3620
Carrier: Delmore
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

HCR 3064: Transportation Committee (Rep. Weisz, Chairman) recommends **DO PASS** (10 YEAS, 0 NAYS, 3 ABSENT AND NOT VOTING). HCR 3064 was placed on the Tenth order on the calendar.

2003 SENATE TRANSPORTATION

HCR 3064

2003 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. **HCR 3064**

Senate Transportation Committee

☐ Conference Committee

Hearing Date 3-14-03

Tape Number	Side A	Side B	Meter #
2	X		450-3986
Committee Clerk Signature	Mary K Monson		

Minutes:

Chairman Senator Thomas Trenbeath opened the hearing on HCR 3064 to study the use of remote-controlled locomotives and related safety and security.

Senator Duaine Espegard (District 43) Introduced HCR 3064. He had concerns with some safety issues.

Representative Phil Mueller (District 24) Talked in support of HCR 3064. Remote controlled trains are an amazing concept taken to the largest extent. It is a wonderful technology and something we will see more of. There are questions about this technology and remote controlled devices that currently run trains. Some large cities have taken a go slow approach to this and have raised a flag that this might be an issue to look at before there is a serious situation. Currently there are four different sites using remote controlled devices in ND. There are questions on the training of those who use the remote controlled devices along with numerous other issues and concerns.

Mike Muscha (Chairman, ND Legislative Board of the BLE) See attached testimony in favor of HCR 3064.

Representative Lois Delmore (District 43) Testified in favor of HCR 3064. These operate in Fargo, Grand Forks, Mandan, and Minot and there are possibilities of expansion. Safety issues need to be looked at. There are questions that need to be answered in respect to training, human error, and homeland security.

Richard Olson (Local Officer, BLE, representing Locomotive Engineers) See attached testimony in favor of HCR 3064 and a list of accidents that have happened within the last twelve months around the United States.

Senator Espegard asked about the distance a remote controlled operator could be from the train.

Richard Olson replied that in Mandan he had seen about 1500 feet with no point protection.

David Kemnitz (President of the ND AFLCIO) Supports the concept of the study and feels it has great merit. (Meter 2630) Cited a case where an accident occurred and the engineer was able to see on that side of the train and was able to stop the train. Someone on the other side of the crossing, operating a remote, could not have seen it and the train would not have stopped as soon.

Dan Kuntz (BNSF) (Meter 2845) Testified in opposition to HCR 3064. This issue has been studied and is being studied. Feels the safety issues are being addressed. Provided a fact sheet about PLCT. (See attached.)

Jerry Suko (Locomotive Engineer, BNSF) (Meter 3300) Showed some of the technology the control operators work with. The operation has been used in Mandan for just over a year. There have been no particular incidents that can be related directly to remote controls. To this point all incidents involving remote control operators and locomotives have been from a human factor

type of situation. Addressed the training process. It amounts to about one week of classroom study with a certified trainer. The second week is on the job training with someone who is already certified.

Tom Kelsch (Canadian Pacific) Opposed to the study on the basis that they don't think it is necessary.

The hearing on HCR 3064 was closed.

2003 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. **HCR 3064**

Senate Transportation Committee

☐ Conference Committee

Hearing Date 3-20-03

Tape Number	Side A	Side B	Meter #
2		X	2460-2665

Committee Clerk Signature Mary K Monson

Minutes:

Chairman Senator Thomas Trenbeath opened HCR 3064 for discussion.

Senator Espegard moved a **Do Pass**. Seconded by **Senator Taylor**. Roll call vote. 5-0-1.

Floor carrier is **Senator Espegard**.

Date: 3-20-03
Roll Call Vote #:

2003 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3064

Senate **TRANSPORTATION** Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do pass

Motion Made By Senator Espegard Seconded By Senator Taylor

Senators	Yes	No	Senators	Yes	No
Senator Thomas Trenbeath, Chair	✓		Senator Dennis Bercier		
Senator Duaine Espegard, V. Chair	✓		Senator Ryan Taylor	✓	
Senator Duane Mutch	✓				
Senator Dave Nething	✓				

Total (Yes) 5 No 0

Absent 1

Floor Assignment Senator Espegard

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
March 21, 2003 1:03 p.m.

Module No: SR-51-5443
Carrier: Espegard
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

HCR 3064: Transportation Committee (Sen. Trenbeath, Chairman) recommends **DO PASS** (5 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). HCR 3064 was placed on the Fourteenth order on the calendar.

2003 TESTIMONY

HCR 3064

RE: House Concurrent Resolution No 3064

Mr. Chairman, members of the Transportation Committee,

My Name is Rick Olson; I am a Local Officer of the Brotherhood of Locomotive Engineers representing Locomotive Engineers. My responsibilities include grievances and contractual agreements at Mandan, ND.
Today I am here to speak in favor of HCR 3064 and offer testimony related to the use of Remote Control Locomotives.

In regards to the RCO (Remote Control Operation) in Mandan, the Brotherhood of Locomotive Engineers have many concerns as to the safe handling of traffic that is routed through the Mandan Consolidated Yards. It is the opinion of the BLE, that operating RCO locomotives without a dedicated or restricted Zone is unsafe and hazardous to the general public. Let me explain. The BLE has a contractual agreement, on the MRL Railroad in Laurel, MT, to perform RCO and it is manned by two certified locomotive engineers working within a dedicated zone that is protected by track derails that prevent unauthorized access. No engines or cars can enter or depart these limits unless authorized. At Mandan the operation is not confined to any zone and RCL (Remote Control Locomotives) are free to move outside the yard traveling north to the Hesket Power Plant, west outside of the yard and east outside of the yard. All these moves include traveling over public crossings while handling cars that contain dangerous chemicals and hazardous materials.

The BLE focus of concern is that the general public has unrestricted access to rail yards because railroads are not required by law to provide a barrier or fence to protect the movements made by trains and railcars. The FRA (Federal Railroad Administration) requires that where RCL operations are conducted, warning signs should be posted indicating that there is no operator in the control compartment of the locomotive. These signs have been posted at the entrance to the switching facility and at public crossings. When the RCO operators attach the locomotives to cars on track they then pull these cars out of the track onto a main artery track called a lead track. The operators are on the ground and movement is protected only by the operator's line of sight. At Mandan Yard the east lead (artery track) flows directly through a mobile home park that is occupied by many families with small children. On the opposite side of the track is every kid's favorite, McDonald's Restaurant. This area is unrestricted to the general public, as it contains no barriers or fences. At the west end of Mandan yard the tracks pass over the Heart River, which empties into the Missouri a few short miles away and there is crossing that school busses cross daily.

The RCL is now manned by Remote Control Operators that are certified after receiving very limited training concerning train handling. A certified Locomotive Engineer requires six months of on the job and classroom training while a RCL operator receives one week of classroom training and one week of on the job training. Certified Locomotive Engineers are required, by Federal Law, to be qualified in regards to the tonnage and must be currently familiar with characteristics of the territory assigned. RCL operators are not required to be qualified on tonnage and they are not required to be familiar with the territory assigned.

To date there have been numerous accidents involving RCO in North Dakota. They all, fortunately, have been without injury to workers and the public. These accidents were all considered unreportable under FRA guideline because the damages did not exceed $6700.00 and no injuries orrured according to the railroads determination.

The question of security in the event of terrorism is real. The railroad industry has made very little effort to deter access to railroad yards and equipment. The RCL is not an exception. The doors of the cab of a RCL are not locked and the control handles are not removed when the RCL is in operation. Because the

operators are positioned on the ground several thousand feet from the engine anyone could enter the cab undetected and take control of the RCL. When locomotives are parked and left unattended they are required to be derailed, to prevent unintentional movement but the RCL while in use is unattended and not provided the same derail protection. RCL operators who carry the beltback (transmitter) are often times working in isolated conditions at all times of the day and night.

In November of 2002, I contacted Mandan Mayor Ken LaMont and city council member Dan Ulmer via email expressing my concerns at Mandan. In a reponse fom Mr. Lamont he indicated that BNSF Railway had never notified the City of Mandan about the use of RCL Operations.

The bottom line is that the general public needs protection in the rail yards of North Dakota. The FRA has not, to date, issued a final rule making and the BLE believes that it is up to the local government to take the action required to assure the safety of it's citizens.

Thank you for your concerns and attention in this very unstable situation.
RA Olson
BLE LC
office- 667-4122
cell- 220-5724

Brotherhood of Locomotive Engineers
North Dakota State Legislative Board
MICHAEL R. MUSCHA — CHAIRMAN · DIV. 671-500
R.R. 1, BOX 57
ENDERLIN, ND 58027
PHONE: 701-437-3338

February 27, 2003

Re: House Concurrent Resolution No. 3064

Mr. Chairman, Members of Transportation Committee

My name is Mike Muscha. I'm Chairman of the North Dakota Legislative Board (NDLB) of the Brotherhood of Locomotive Engineers (BLE). I represent the locomotive engineers in the state of North Dakota. I appear here today as a proponent of HCR 3064. This study is necessary to gather information on the remote control locomotive operation now operating in Fargo, Minot, Grand Forks, Mandan and other cities where remote control locomotive operation may be implemented.

Mr. Chairman, over the past three weeks I have met with the Senate Majority Leader, Senators, the House Minority Leader and Representatives concerning remote control locomotive operation. These meetings brought to light the fact that many of our state legislators did not realize to what extent remote control is being operated in North Dakota. I informed the Representatives of the railroad companies' intent to expand remote control operation. Our state legislators were uninformed about the implementation of remote control locomotive operations, because of a preliminary injunction issued by Judge Gotschall on January 14, 2002. I have not come forward before because this injunction imposed a potential $25,000.00 penalty for picketing or speaking out in opposition to the use of remote control locomotives.
The citizens of North Dakota have the right to know about remote control locomotive operation.

The railroad companies must take responsibility for the safety and security concerns of their employees and the citizens of North Dakota. This includes crossing highways, rivers, public water supplies, and traveling through residential areas. Doesn't everyone in this room remember the tragic accident in Minot a little over 13 months ago? This was not a remote control locomotive accident but it could have been. There were countless mistakes made in the general warning and evacuation of the citizens of Minot after the hazardous material release. Remote control locomotive operations are inherently less safe because there is one less pair of eyes to see and one less voice to communicate emergencies that arise. The very nature of remote control operations increase the potential for organizational accidents because work load increases while the usual sensory information and instrumentation for operation are lost while the operating employee is on the ground performing other duties. During the operation of remote control locomotives the operator does not have ready access to the quality communication devices available in the cab of the locomotive. I hate to say this, but I

believe this type of accidents will happen again. We must do everything we can to ready ourselves where remote control locomotive are being operated and help the cities where it will be implemented.

Mr. Chairman, in the rush to implement remote control locomotives, the railroad companies did not wait for a final rule making from the Federal Railroad Administration (FRA). The railroad companies implemented these operations based on the FRA's published guidelines for conducting RCL (remote control locomotive operation). These were minimal recommended guidelines that were only intended for pilot projects and not for a complete transition from conventional to remote control yard operations. To date, there are no federal regulations that govern the use of remote control locomotives, nothing to mandate the quality and extent of training, or public safety issues.

Mr. Chairman, the BLE strongly urges this Committee to investigate the use of remote control locomotives within the State of North Dakota. North Dakota has a compelling interest to protect its citizens and its communities from the dangers of moving railroad freight cars with this controversial technology, which takes the human being off the locomotive. As a representative of experienced, federally certified locomotive engineers, I have serious concerns about the lack of adequate training provided the inexperienced railroad personnel currently operating these remote control devices.

Mr. Chairman, on behalf of the BLE, I urge a **do pass** on HCR 3064.

Thank you for allowing me to testify today on this important public safety matter.

February 27, 2003

RE: House Concurrent Resolution 3064

Mr. Chairman, members of the Transportation Committee

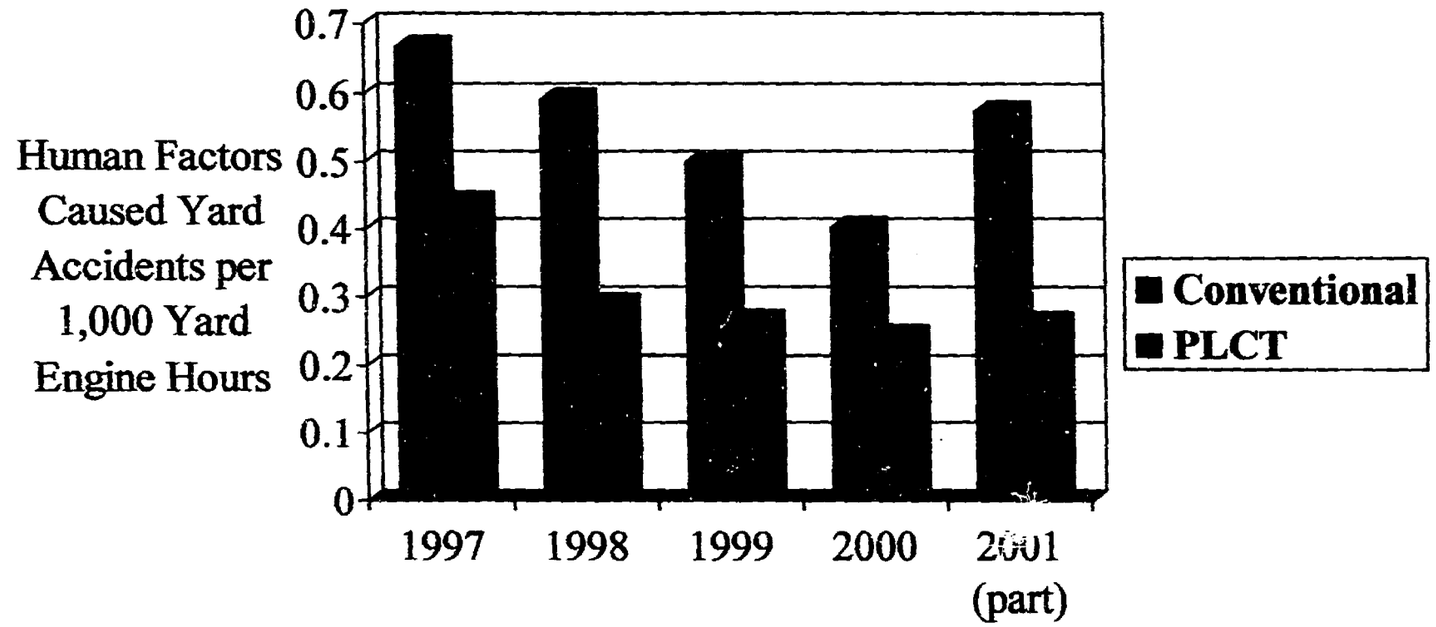
For the record my name is Ron Huff, I represent the Brotherhood of Locomotive Engineers.

A remote control locomotive has NO engineer in the cab of the locomotive . No one to be looking out for people or car crossing the tracks.

The remote control locomotive can be operated up to one (1) mile from the operator. During switching movements we stop and start constantly. When we are in residential areas this becomes a dangerous act for pedestrians and employees, due to the fact of limited visibility such as snow, rain, darkness. Just think about what you yourself can see under similiar conditions.

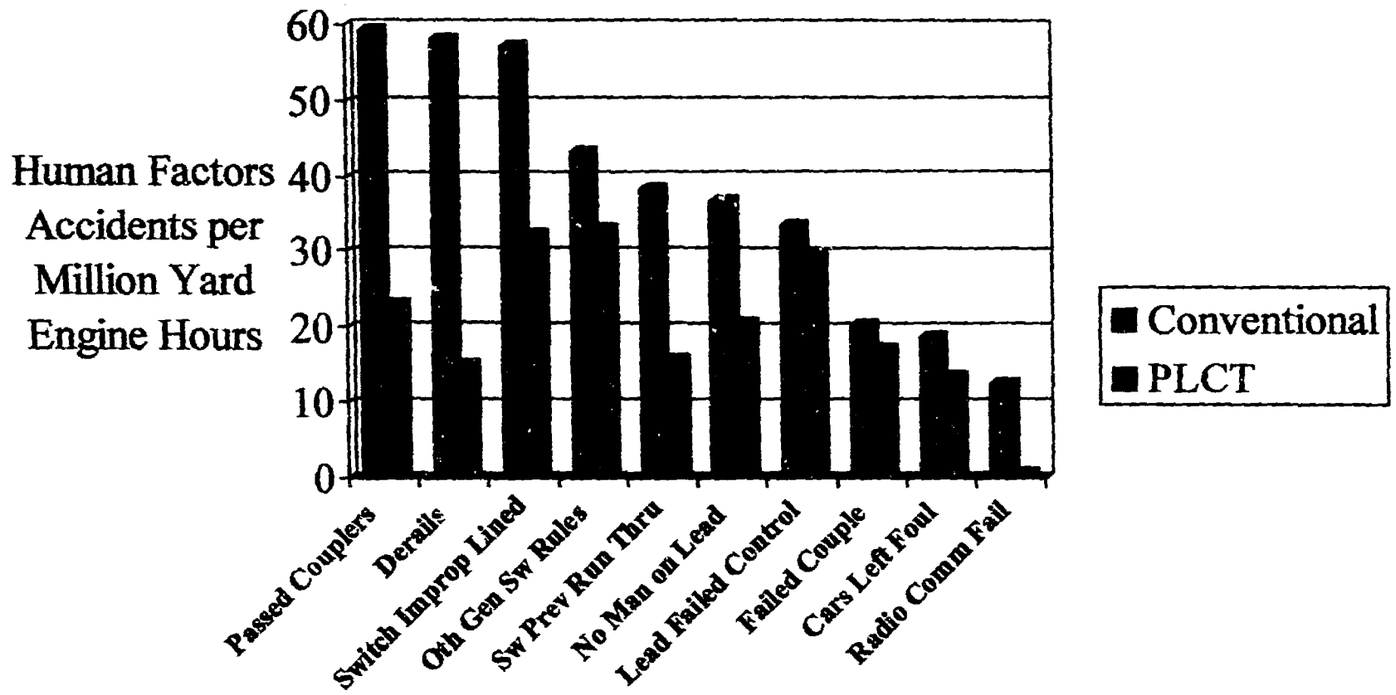
RON HUFF
Brotherhood of Locomotive Engineers

PLCT has been consistently safer than conventional technology over time on CN Rail.



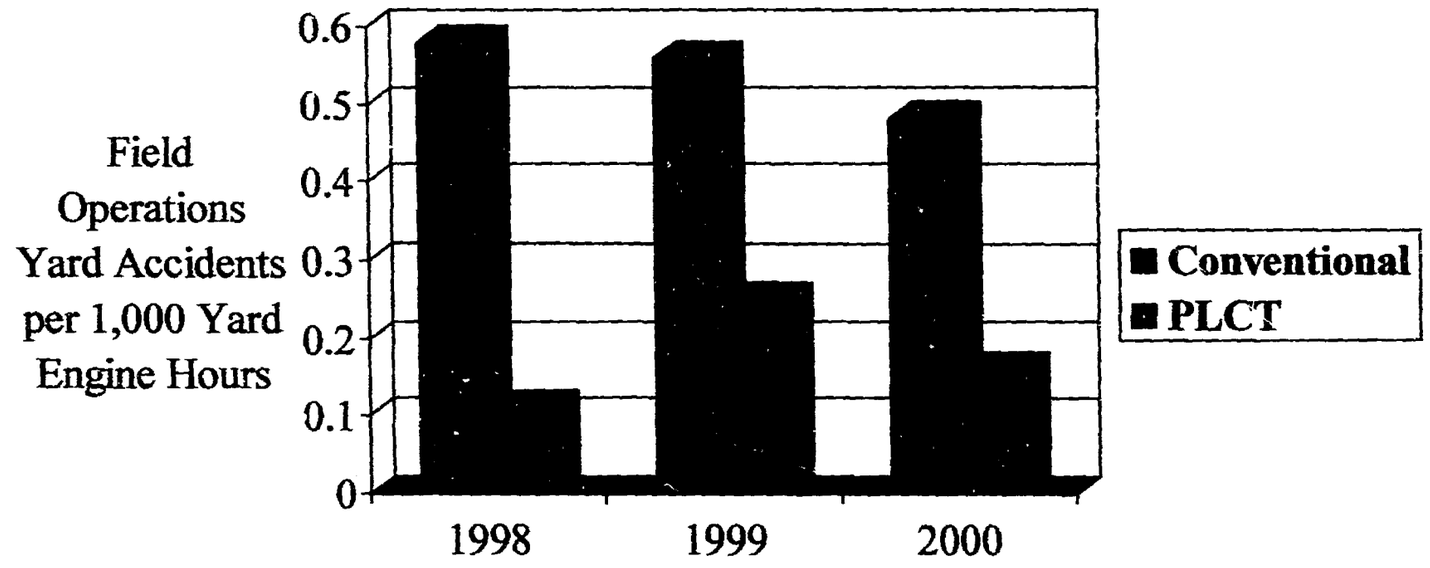
Notes: Accidents include those below FRA-Reporting Threshold.
2001 Statistics thru June 30. Data from CN Rail.

The PLCT accident rate on CN has been lower for each of the top ten causes of yard accidents.



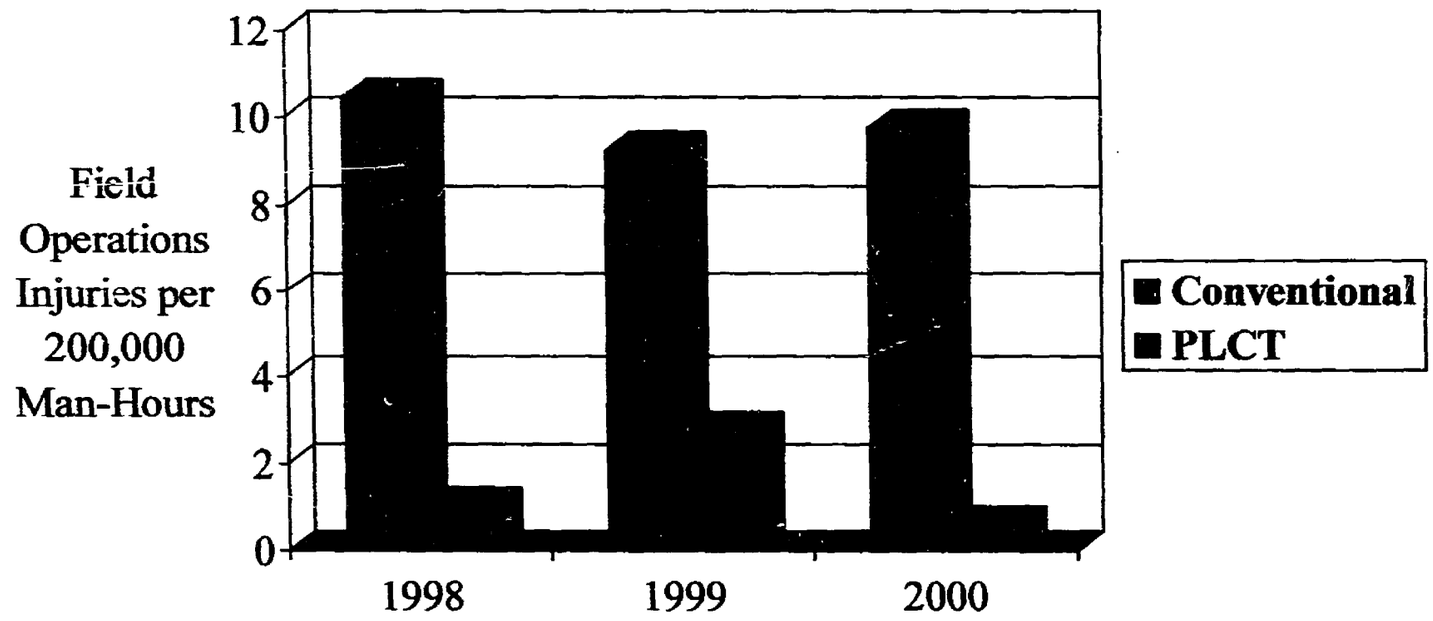
Notes: Accidents include those below the FRA Reporting Threshold.
Period: 1997-99, Inclusive. Radio Comm Fail = H209 to H212

On CP, PLCT has had accident rates about one-third those of conventional technology.



Notes: Accidents include those below the FRA-Reporting Threshold.
Data from Canadian Pacific, 15 Major Yards, Canada only, Yard Switchers only.

PLCT has also resulted in consistently lower employee injury rates on CP.



Notes: FRA-Reportable Injuries only.
Data from Canadian Pacific,15 Major Yards, Canada only.

Remote control: Technology trumps tradition

Successful pilot programs, a new wave of technology, and labor conflicts mark the widespread implementation of locomotive remote control in the U.S.

By Christopher Ytuarte, Associate Editor

The domestic power struggle between a husband and wife is typically illustrated in American humor through the battle for the television remote control. Similarly, though it can't change the channel, locomotive remote control can change the way a rail yard is run and by whom. And the battle for this hand-held device does not evoke images of marital bliss, either.

With dozens of pilot programs currently running on Class I railroads throughout the U.S. and with years of documented success in Canada, remote control is viewed by some as the future of safety and efficiency in the industry, even as it drives a wedge between the labor unions vying for its control. Railroads, wanting the type of productivity and profitability increases touted by suppliers, have begun to implement remote control systems nationwide under new Federal Railroad Administration guidelines and training requirements.

Meanwhile, the industry's two largest labor unions—the United Transportation Union and the Brotherhood of Locomotive Engineers—though in agreement on their general distaste for the technology, are split in philosophy on how to approach it.

And waiting for the dust to settle, suppliers are keeping busy ramping up their production capabilities, maintaining their in-service products, and developing new technology for the next step in the remote control revolution.

Whose remote is it, anyway?

On Jan. 10, a decision rendered by neutral arbitrator Gil Vernon, Chairman of Special Board of Adjustment No. 1141, effectively awarded the right to operate locomotive remote control units to the UTU, bringing what would seem to be an end to a long struggle between UTU and BLE leadership over control of this burgeoning technology. Key to the ruling was the arbitrator's understanding and definition of the type of work performed by remote control systems in a switching yard. According to Vernon's decision, "[Locomotive] control decisions are not made exclusively by the engineer but are made by the groundman. In the 'move' intensive world of yard and ter-

BILL MAYO/CATTRON-THELMEG

Above: Cattron-Thelmeg, maker of the Accuspeed™ locomotive remote control unit, recently patented its Synchronized Time Sharing™ system, allowing railroads to calculate the number of locomotives that can fit in a time slot.

minal operations, the groundman usually makes these decisions rather than the engineer."

That clarification is the basis for the arbitration ruling against the BLE. It said that "the control of engines in terminals is not by custom and practice exclusively reserved to engineers," and that "the operation of remote control units by UTU groundsmen does not constitute an infringement on the traditionally exclusive duties of an engineer," as the BLE has long claimed.

In his ruling, Vernon emphasized the simplicity of properly utilized locomotive remote control technology as one reason why it should not be relegated exclusively to highly-trained engineers:

"[I]t could be said that a traditional engineer operating an engine is like a highly skilled French chef preparing a seven-course meal from scratch (adding various combinations of ingredients and cooking them in various ways), and the remote control operator in yards and terminals just puts the TV dinner in the microwave, sets the time and pushes the start button (set it and forget it)."

BLE International President Don Hahs expressed outrage over the arbitration ruling, predicting industry-wide job losses and dangerous working conditions for remote operators.

The CANAC Beltpack™ unit is in use on 50 Kansas City Southern locomotives.

"First and foremost, the decision creates serious safety concerns for railroad employees and the general public," said Hahs. "Citizens should be concerned about the remote control technology itself because it is not totally reliable. Any piece of equipment, like the remote control devices, will malfunction at some point. No matter how reliable they are, they will fail."

UTU International President Byron Boyd spoke with *Railway Age* regarding the arbitration and its effect on the industry.

"It wasn't our desire to bring remote control into this industry," says Boyd. "It is new technology, we were confronted with it, and we addressed it for the betterment of our membership. The BLE was invited into the process, and they chose not to be a partner, for whatever reasons. After the decision came down in support of our agreement with the carriers, I extended an olive branch to the BLE. Our view is that we're not going to stop technology, and I'm not going to allow the members of the UTU to suffer because of a short-sighted approach to these technological changes. At the same time, I'd like to reach out to the BLE to bring them into the process. We believe it's just another example of why the operating employees on the railroads should be represented by one union."

On whether the UTU and the railroads were collaborating, as the BLE has suggested, Boyd reiterated that the UTU is not in favor of remote control, but rather is in favor of its members remaining employed.

"The carriers are the ones that brought the technology on board, and the carriers are the ones that have the jobs," he says. "I don't know whom else we're supposed to deal with to address our needs and concerns other than the people who have the technology. And, as a result of our agreements, we now own that technology. I believe those who want to throw stones or cast aspersions in this direction are doing so as acts of regret, since they don't have the work themselves."

> "I'm not going to allow UTU members to suffer because of a short-sighted approach to technological changes."
> —Byron Boyd, UTU International President

Boyd felt that the ruling in favor of the UTU should only further strengthen his call for a unified rail labor union.

"A merger makes sense now more than ever," he says. "This reinforces the position we had taken before we entered into arbitration. We'll go forward with what we believe to be the correct position with regard to representation of operating employees, and a merger of these unions is the best way to go about it. But there are other means of doing it, if we have to. We're not going to give up trying to get the operating crafts together. They *should* be together. And the only reason they're not together now is because of artificial means and reasons."

The core of the BLE case, as stated by Hahs, remains the issue of safety, that of both rail workers and the general public. They claim that UTU members assigned to remote control positions will be inadequately trained, and cite more than 30 accidents and derailments the BLE has reported over the past year as evidence. "Why the railroads would choose to de-skill a position and deny people the work they spent a lot of money training them for, I can't figure out," said Hahs.

Railroads and suppliers argue that such incident reports are being exaggerated by labor unions out of concern for job losses rather than safety.

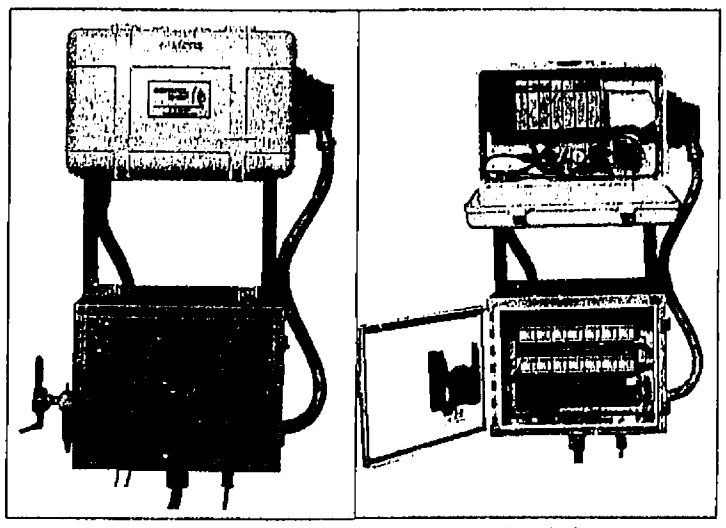
Even so, several cities in the U.S. have passed legislation that bans any use of remote control locomotives in yards. Most recently, officials in Shreveport and Baton Rouge, La., as well as Marysville and Detroit, Mich., have outlawed the technology.

Following the arbitration ruling in January, the Association of American Railroads weighed in on the safety concerns when President and CEO Edward R. Hamberger took issue with the claims of dangerous working conditions.

"There is absolutely no data or evidence to support those who say the new technology compromises safety," he said in a statement. "Experience and logic tell us just the opposite."

Pilot programs push forward

Implementation of locomotive remote control on every Class I railroad in the U.S. would seem to be a sure bet. In Canada, there are 180 remote control units currently in use, and it is believed that there are already some 500 units being utilized on U.S. short line and regional railroads. The success of the Class I pilot programs currently running in the U.S. should prove a good barometer as to what the remote control market holds for the future.



The transferable locomotive remote control unit from Control Chief, called the Plug-and-Go™, allows users to install it on any locomotive in relatively short time.

In April 2002, UTU General Chairman Dean Hazlett was the union representative for the remote control operators at Union Pacific's Hinkle hump yard pilot program in eastern Oregon. During the initial training period, according to Hinkle, productivity in the yard dropped noticeably. But now that all the operators are qualified and are working with full knowledge of the equipment and the site, productivity has increased 5% above what it was before remote control implementation.

"With remote control, we have concerns about the elimination of jobs, but I think we're better off sitting down and reaching an agreement through which we can control the process," says Hazlett, echoing the UTU position. He is sure that within the next few years, railroads will begin to truly see the profitability and benefits of remote control, starting with increased productivity in yards. "In the long run, there will be fewer people working, which increases carrier profits," he says. "Of course, there will a time period where they will be waiting for their return on investment for the equipment and training. But the end result will be the hiring of fewer people, which certainly will increase profits."

Down in Florida, UTU General Chairman John Hancock has worked with both CSX Transportation and the Florida East Coast Railway in implementing successful remote control pilot

programs.

"As the pilot projects were set up on the property, our basic position was that we didn't want remote control. However, we thought it was better to sit at the table and negotiate how it would be done rather than saying 'No, we don't want it,'" says Hancock. "We'd rather be at the bargaining table than not have the work at all. Based on that concept, we sat down with the carriers and gave them some guidelines on what we thought we needed safety-wise. By sending a general committee officer out to each location of implementation, that part of the project went as smoothly as it could possibly have gone, bearing in mind you still had those aversions to change."

Under Hancock's supervision, CSXT installed locomotive remote control at ten of its yards, with 95% of the programs going off without a hitch. Implementing Cattron-Theimeg's Accuspeed™ units, CSXT has seen great success, and Hancock thinks the technology will eventually provide a boost to railroad productivity.

"Remote control gives the carrier the ability to work with fewer people, which is something we work against," says Hancock. "But at the same time we're cognizant of technological changes. And it's my position that we'd rather be at the table negotiating change and securing jobs for the people we represent than sticking our heads in the sand and ignoring its existence. As the saying goes, 'You'll get left at the train depot as your train passes you by.'"

> "Remote control technology is more than just a piece of equipment. It is a collection of the best handling practices, built into one component."
>
> —Frank Trotter
> President and CEO
> CANAC

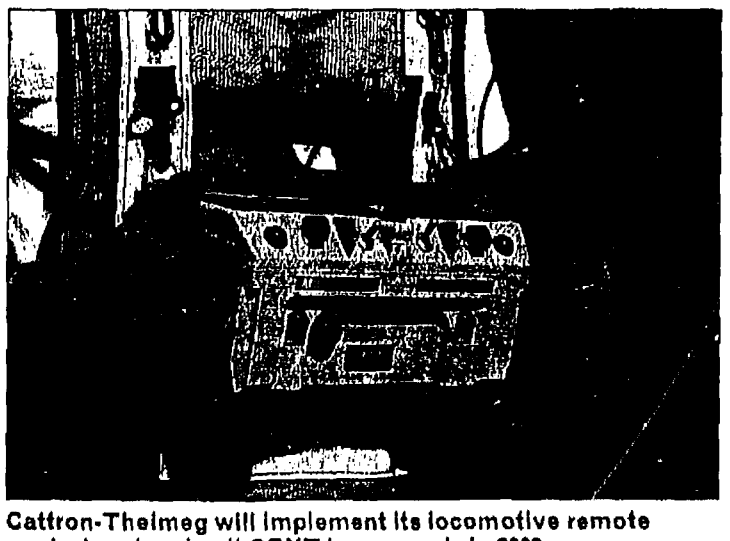
Hancock's work with FEC helped implement remote control on a railroad that has actually been utilizing the technology since the late 1960s. In accordance with the new FRA guidelines, he aided FEC in upgrading safety standards and remote systems. Over the past year, FEC has equipped five GP38s with CANAC's Beltpack™ technology and now has 83 employees on the property qualified to operate locomotive remote control.

"We've made some great productivity gains," says FEC Vice President-Transportation Charlie Lynch. "We've managed to take three-person crews and reduced them to two-person crews, both members of which are qualified remote control operators. We feel it's a much safer operation now. What we've done, in essence, is take out the communication link between the person on the ground and the engineer in the cab. We feel we've put control in the hands of the person who really needs the safety protection."

Lynch says that a big part of the implementation process was

sitting down with the FRA and UTU to make sure all involved were on the same page. Another key aspect was the creation of "remote zones," areas of the terminal that are off limits to anyone not qualified as a remote operator.

"Basically, the zone concept says the remote control crew, when operating in that zone, has exclusive use of that track," says Lynch. "No other train crew or anybody else can enter that zone unless a remote operator gives them permission. Whereas a three-person crew operates under yard-limit rules involving "seen-and-be-seen" rules and communication with the yardmaster, the remote zone gives the operator control of the railroad he's switching on."



Cattron-Theimeg will implement its locomotive remote control system in all CSXT hump yards in 2003.

Echoing the thoughts of Gil Vernon on the simplicity of remote control, Lynch says that "any 16-year-old who ever played a video game could be a very good remote control operator in a short period of time." At the same time, he emphasized that completing the remote training and truly being "qualified" are two very different things.

"Different types of switching dictate when an operator is 'qualified' to use remote control at a certain location," he says. "For example, the remote switching performed in the FEC yard in Miami primarily involves very heavy aggregate cars and loaded, 100-ton rock hoppers. The switching in our yard at Bowden often involves empty or intermodal flat cars. So if a person is switching one type of car in one yard and goes to another yard with different types of cars, he has to get a feel for how those cars roll before he can be at his best."

Technological advancements

According to industry sources, the market for remote control technology in rail yards could reach 2,000 units in the near future. Such predictions have suppliers expanding their production capabilities and developing new technology as widespread implementation draws near.

"We've had to ramp up our production facilities in Pittsburgh," says CANAC President and CEO Frank Trotter. "We've made arrangements with contract shops for installation around the U.S., and we have to monitor the work in those shops. And after the work is done, we have to commission the

systems in terms of frequencies and make sure everything is ready to go. All this involves a tremendous field force, which we've had to ramp up and deploy over the past year. We've got people at all four corners of the continent working with the customers in the yards, whether it's with training or with the locomotives themselves, fine-tuning everything."

At Control Chief, the newly developed Plug-and-Go™ unit makes remote control transferable.

"The railroads are currently utilizing fixed radio remote control systems installed in the locomotive cab, and the locomotive is being moved to a different location or maybe not put into use, which leaves the remote technology not in use," says Vice President-Sales and Marketing Tony Habovstak. "Plug-and-Go makes it mobile so that the technology can be moved from one locomotive to another, utilizing the asset on a more broad basis. It also cuts the cost of installation and makes it more productive."

Cattron-Theimeg has recently patented new capabilities for its existing systems. Synchronized Time Sharing™ utilizes a GPS timing device on board the locomotive along with two-way digital data radios to form a system that maximizes radio spectrum efficiency to nearly 100%. CSXT has also contracted Cattron to install remote technology in all of its hump yards in 2003.

"A year ago, there was a lot of uncertainty," says Cattron Senior Vice President-Railroad Operations Jim Kingerski. "The railroads now know that the products will work and they're moving forward, and Cattron is moving forward with technological advances, not only for this year, but for years to come."

> "Remote control will never replace every job in a yard. It simply puts the control in the hands of the person who really needs the protection."
>
> —Charlie Lynch
>
> V.P.-Transportation
>
> Florida East Coast Railway

GE Transportation Systems-Global Signaling has developed the Locotrol® Remote Control Locomotive system, which it says is the only unit on the market offering complete communication coverage with RF router flexibility.

Technological advancements over the coming year will involve further integration of switchyard functions into one unit. RailComm President and CEO Joe Denny says his company is developing a remote control system that is "a centralized, server-based control system for yards," with several different functions on one platform, including remote switch control and routing, blue flag protection, derail control, pull-back protection, and shove light systems. Along with working on its own product, RailComm is talking with several locomotive remote control suppliers about integrating the technology into their units.

"We don't see any resistance to this technology," says Denny. "Not even from the unions."

Facts About Portable Locomotive Control Technology (PLCT)

- Train accident rates in Canadian rail yards have been cut by more than half over the past decade in yards where PLCT is used. Reduction in yard accident rates is especially important since that is where the most serious employee injuries occur.

- Canadian National accident rates between 1997 and 2001 were 44 percent lower at yards where PLCT is used than at yards where conventional technology is used.

- Canadian Pacific reports that the rate of yard accidents under PLCT is about one-third that of the rate in yards where conventional technology is used.

- "To date we have not had any significant concerns" with remote control implementation, says Federal Railroad Administration spokesman Warren Flatau.

- All of the major U.S. railroads are currently testing PLCT, and no injuries or accidents have been attributed to PLCT.

- There will be no jobs lost due to the rollout of PLCT.

PLCT Safety Features

- Constant communication exists between the operator and the locomotive.

- Fail safe design brings the locomotive to a stop if communication is interrupted, the operator does not indicate alertness at regular random intervals or the operator falls and tilts the equipment.

- Locomotive control device responds only to its assigned transmitter.

- Two separate actions are required before the locomotive can move.

- Ground operator directs the locomotive using a transmitter that sends digital signals to a microprocessor on the locomotive.

- Technology reduces the possibility of miscommunication that existed when the person on the ground used hand signals or radio to communicate to an engineer in the cab.

PLCT Safe Operating Practices

- Operator certification training programs are filed with the FRA.
- Operating rules are filed with the FRA.
- Equipment will be inspected daily.
- PLCT won't be used on passenger trains.

PLCT Development Spans Two Decades

- Technology was introduced 20 years ago and first was used by industrial railroads (i.e., non-common carriers that shuttle cars delivered to in industrial plants private yard by common carrier railroads).
- Canadians began to use the technology in the late 1980s.
- FRA grants waiver permitting first use of technology by common carrier railroads in the U.S. in 1994.
- FRA issues guidelines for using the technology in 2001.
- February 2002, UTU, railroads represented by National Carriers Conference Committee reach agreement on implementing pilot projects using PLCT.
- Current manufacturers of PLCT include CANAC; Cattron-Theimeg; and Control Chief.

The Brotherhood of Locomotive Engineers Demand Safe Train Operations...

..And You Should Demand Safe Train Operations As Well !

The Brotherhood of Locomotive Engineers is warning communities across the U.S. of the potential dangers associated with Remote Controlled Train Operations.

Locomotives are being operated without fully trained, qualified and experienced Locomotive Engineers on board and are being controlled from a remote location by a person who wears a remote control device strapped around their waist. The safety of this device is not proven!

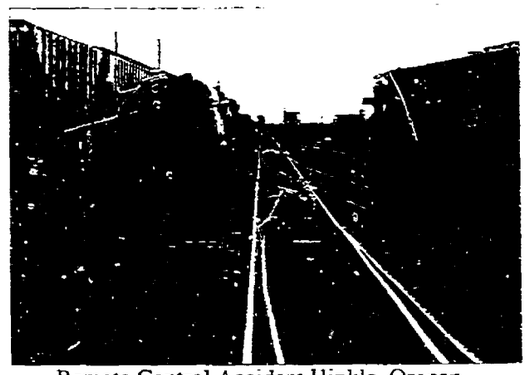
Despite a 2-14-2001 Federal Railroad Administration Safety Advisory that states, "FRA has limited data on which to base an objective safety analysis and must therefore proceed prudently," the railroads have chosen an irresponsible plan to implement remote control operations at rail yards around the country, and (even tried to expand these operations to ain track.

UP, BNSF, CONRAIL, CSX, KCS, AND NS are currently implementing Remote Control Operations (RCO) at many of their major switching terminals across the country. *Railroads are major transporters of nuclear waste, hazardous materials and chemicals. These deadly materials will soon be handled by Remote Control in a neighborhood near you!* Since implementing this new program many of these railroads have experienced numerous accidents.

EVERY 90 MINUTES THERE IS A TRAIN ACCIDENT SOMEWHERE IN THIS COUNTRY....

APPROXIMATELY EVERY TWO WEEKS A TRAIN LOADED WITH HAZARDOUS MATERIALS GOES OFF THE TRACKS SOMEWHERE IN THE U.S. RESULTING IN A SPILL AND EVACUATION OF RESIDENTS LIVING NEARBY !

Train Derailment - Little Rock, AR



Remote Control Accident Hinkle, Oregon

ARE YOUR CHILDREN AND NEIGHBORHOODS SAFE ?

In spite of U.S. Department of Transportation's warnings about potential terrorist attacks on railroads, this nation's largest railroads are moving ahead with plans to remove skilled, fully trained and qualified Engineers from some trains. While the airline industry is increasing security by placing trained professionals in airports and on airplanes, this nation's railroads are taking Engineers off some trains and running those locomotives by remote control. Those locomotives have no one in the operating compartment and have no safety system installed to replace the eyes, ears and experience of a Locomotive Engineer.

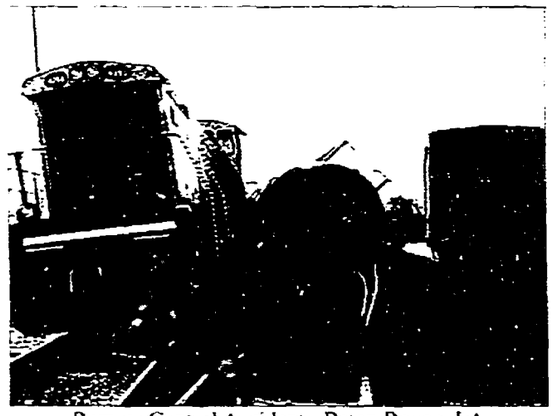
DON'T WAIT UNTIL A DEADLY ACCIDENT HAPPENS IN YOUR NEIGHBORHOOD ...

TAKE ACTION

CALL OR WRITE YOUR

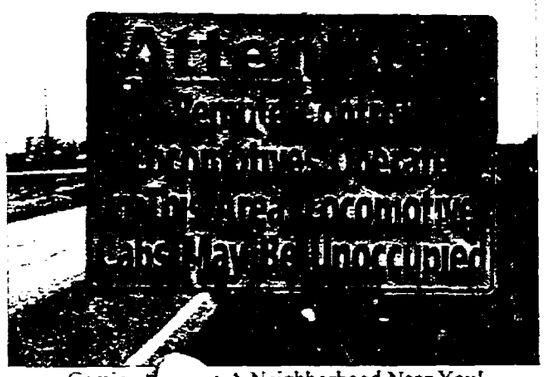
CONGRESSMEN AND SENATORS

TODAY !



Remote Control Accident - Baton Rouge, LA

LET YOUR ELECTED REPRESENTATIVES KNOW THAT YOU ARE VERY CONCERNED ABOUT THE POTENTIAL DANGERS ASSOCATED WITH REMOTE CONTROLLED TRAIN OPERATIONS THAT ARE BEING IMPLEMENTED IN AND NEAR YOUR NEIGHBORHOODS. TELL THEM YOU WANT TRAINS IN YOUR NEIGHBORHOOD CONTROLLED BY THE MOST FULLY TRAINED, QUALIFIED AND EXPERIENCED RAILROAD OPERATING CRAFT EMPLOYEE! FOR SAFETY'S SAKE!



Coming To A Neighborhood Near You!

OK, I'm Concerned, But What Can I Do About It?

You Can Contact Your City, County, State and National Elected Representatives.

What Should They Do?

Many communities are addressing this serious public safety issue by passing resolutions that limit or ban the use of Remote Control Locomotive Technology within their city or county limits.

These communities are also urging the Federal Railroad Administration (FRA) to;

- **Conduct a comprehensive and thorough review of the safety of remote control locomotives now in use.**
- **Develop comprehensive regulations governing the use of remote control locomotives.**

Who Is My Representative?

Find Your Representatives By Visiting:
http://www.house.gov or http://www. senate.gov

U.S. Capitol Switchboard:
(202) 224-3121

For More Information Contact:
John Bentley (216) 241-2630 ext. 248
E-mail: bentley@ble.org

Or Visit:
http:// www.ble.org/remotecontrol
and
http://www.remoteinfo.org

BLE is Affiliated with AFL-CIO

Brotherhood of Locomotive Engineers
Since 1863, A Tradition of Forward Thinking

PUBLIC **SAFETY** ADVISORY

UNMANNED LOCOMOTIVES A DANGER TO PUBLIC SAFETY

Remote Control Accident - Hinkle, Oregon

The Brotherhood of Locomotive Engineers believes and supports the position that this nation's railroads could avoid many accidents, safety hazards and operating inefficiencies by continuing to put control of **all** locomotives in the hands of the most highly trained, skilled and experienced operating craft employee in the rail industry. Further, this nation's railroads have not adequately responded to BLE's many safety concerns, including those associated with remote control.

The Use of Remote Control Technology

Top
BLE Articles
Newspaper Headlines
Accidents
Rallies
Background

Accidents

- Syracuse, N.Y. (CSX)
  February 16, 2003
- Baton Rouge, La. (KCS)
  February 12, 2003
- Amarillo, Texas (BNSF)
  February 9, 2003
- Boyle Yard, Birmingham, Alabama (CSXT)
  February 5, 2003
- Washington State (BNSF)
  February 3, 2003
- Galesburg, Ill. (BNSF)
  December 21, 2002
- Kansas City, Mo. (UP)
  December 7, 2002
- Des Moines, Iowa (UP)
  December 3, 2002
- Burns Harbor, Ind. (steel mill)
  November 29, 2002
- Tampa, Fla. (CSX)
  November 14, 2002
- Chicago, Ill. (CSX)
  November 1, 2002
- Cumberland, Md. (CSX)
  November 1, 2002
- Lincoln, Neb.
  October 31, 2002
- Cajon Pass, Calif. (Cargill)
  October 28, 2002
- Pine Bluff, Ark.
  October 25, 2002

- Chicago, Ill. (CSX)
  October 16, 2002
- Milpitas, CA (UP)
  September 24, 2002
- Napa Valley, Calif. (California Northern Railroad Co.)
  September 17, 2002
- Hinkle, Ore. (UP)
  September 5, 2002
- Galesburg, Ill. (BNSF)
  August 28, 2002
- Louisville, Ky.
  August 26, 2002
- Baton Rouge, La. (Kansas City Southern)
  August 10, 2002
- Atlanta, Ga. (CSX Transportation)
  August 8, 2002
- Shelton, Wash. (Puget Sound & Pacific Railroad)
  August 6, 2002
- Hinkle, Ore. (UP)
  July 26, 2002
- Hinkle, Ore. (UP)
  June 14, 2002
- Hinkle, Ore. (UP)
  June 9, 2002
- Montogmery, Ala. (CSX Transportation)
  June 1, 2002
- Neff Yard, Kansas City (Union Pacific)
  May 30, 2002
- Romeoville, Illinois (industry job)
  May 19, 2002
- Hinkle, Oregon (Union Pacific)
  May 5, 2002
- Hinkle, Oregon (Union Pacific)
  April 29, 2002

http://www.ble.org/remotecontrol/accidents.asp

3/14/03

- Des Moines, IA (Union Pacific)
  April 24, 2002

- Hinkle, Oregon (Union Pacific)
  April 20, 2002

- Montgomery, Ala. (CSX Transportation)
  April 16, 2002

- Shreveport, La.
  March 24, 2002

- Michigan City, Indiana (industry job)
  March 7, 2002

- Laurel, Montana (Montana Rail Link)
  February 19, 2002

- Kalama, Oklahoma (industry job)
  December 24, 2001

- Blair, Nebraska (industry job)
  December 19, 2000

Portable Locomotive Control Technology

ASSOCIATION OF AMERICAN RAILROADS — JANUARY 2003

ISSUE OVERVIEW

Accidents in rail yards account for more than half of all train accidents. Human factors-caused accidents in yards account for about half of all yard accidents, or about one-quarter of all train accidents. Portable locomotive control technology (PLCT), which allows railroad personnel on the ground to operate and control locomotives through the use of a small control device that transmits signals to a microprocessor on board a locomotive, promises to bring about a significant reduction in human-factors caused yard accidents and hence a noticeable decline in the overall train accident rate.

PLCT systems have been used extensively for several years on the two major Canadian railroads, numerous U.S. non-Class I railroads, and many private industrial U.S. railroads. U.S. Class I railroads are beginning the process of implementing PLCT systems.

The two components of PLCT systems are a handheld operator control unit (OCU) and a mobile control unit (MCU). Before PLCT operations begin, the operator places the MCU in the locomotive cab and initiates a process to ensure that an OCU's commands will be implemented only by the intended locomotive, and that the intended locomotive will accept commands only from the appropriate OCU. During operation, digital packets of information are transmitted several times per second from the OCU to the MCU.

The OCU operator controls the locomotive's operation. All significant events, such as operator commands, are recorded and time stamped. To help ensure that locomotives do not begin to move accidentally, two separate actions are required by the OCU operator before the locomotive will move.

In February 2001, the FRA released guidelines addressing PLCT design, operation, training, and inspection and testing. As with other aspects of railroad operations, the FRA will retain authority over the safe operation of PLCT systems. The rail industry has developed a comprehensive training program for OCU operators, who are certified pursuant to FRA-

approved certification programs. PLCT equipment will be inspected daily, and will not be used on passenger trains.

In January 2002, a major rail labor union and most Class I railroads agreed to implement pilot projects utilizing PLCT at various locations in the United States.

JUSTIFICATION FOR DESIRED POLICY

- Far from diminishing safety, as some detractors claim, PLCT systems actually enhance safety by substantially reducing the risk from human and other error in rail operations:
  - *Avoiding miscommunication.* Conventional rail yard operations rely on ground personnel using hand signals or radios to instruct locomotive engineers on train movements. This system of communication is open to misunderstanding and delayed reactions, with potentially tragic results. PLCT represents a marked improvement because it allows an OCU operator with a closer and unobstructed view of the leading edge of the movement to control the locomotive. The OCU can instantaneously control a train in reaction to perceived problems.
  - *Fail-safe design.* If communication is interrupted between an OCU and an MCU, the train automatically stops.
  - *Dynamic speed control.* Once the speed is established by the operator, the PLCT controls the movement of the locomotive by adjusting the throttle and brakes as necessary; the OCU operator does not have to look down continually at the OCU and make adjustments. Instead, the OCU operator can concentrate on train movement and the surrounding environment.
  - *Tilt detection.* If an OCU tilts more than 45 degrees from the vertical position for more than one second (for example, because the operator falls), an alarm sounds. If it is not returned to an upright position quickly, the locomotive automatically stops.
  - *Operator alertness.* If PLCT systems do not detect operator activity within a specified period of time, an alarm sounds. If the alarm is not reset promptly, the locomotive is automatically stopped.
  - *Bell signals.* Whenever a locomotive operated by PLCT starts to move, the locomotive's distinctive bell automatically sounds, eliminating the need for an operator to sound it.
  - *Pitch and catch.* This feature allows two OCUs to communicate with a train, so that a train that will move in two directions can be controlled by operators at both ends. Only one operator has control of the locomotive at any one time, but at all times either operator can stop the train. If pitch and catch is utilized, continuous communication with both OCUs must be maintained or the PLCT system will stop the train.
  - *System monitoring.* PLCT systems monitor important parameters such as the air pressure in brake system components and system voltages. If a problem is detected, the system will either warn the operator or automatically stop the locomotive.

- *Recording and time stamping.* Because all significant events are recorded and time stamped, PLCT can serve as a sort of "black box" to allow investigators to scrutinize the cause of problems if they occur.

- Data from Canadian operations demonstrate that PLCT systems enhance safety. On the Canadian National Railway (CN), PLCT has been used since 1989 and is now used for almost half of the railroad's Canadian yard operations. At CN, accident rates from the 1997-2001 period for yard operations using PLCT were 44 percent lower than the rates for yard operations using conventional technology, and no accidents have been attributed to the PLCT system itself. On the Canadian Pacific Railway (CP), which has used PLCT since 1994, the rate of yard accidents under PLCT has been about one-third that of conventional technology; yard accidents on CP have fallen some 70 percent since the introduction of PLCT.

- Since passage of the Staggers Rail Act of 1980, freight railroads have been among the most productive of all U.S. industries. Productivity gains have allowed railroads to sharply reduce rates (saving shippers billions of dollars each year) while plowing hundreds of billions of dollars back into their systems. Continued productivity gains are critical if railroads are to continue to offer the safest, most efficient, and lowest cost transportation service possible to their customers and the communities they serve. Wider use of PLCT systems would lead to productivity gains.