C.I. 78-2126 — 78-2130

# 1977 National Safety Congress Transactions

VOLUME 22 Railroad





National Safety Council

# 65th NATIONAL SAFETY CONGRESS

## Papers Delivered in the Railroad Sessions





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## Railroad Sessions

# TOTAL EYE PROTECTION


By R. D. SHAVER
Supt. of Safety
Atchison, Topeka & Santa Fe Railway, Chicago, IL


There have been a lot of changes in railroading, but there really hasn't been all that many changes in safety. The problem we had 30 years ago, for the most part, is the basic and primary problem we have today—people.

It is my personal and sincere opinion that a good safety performance, a good safety program (yes, a good safety record) comes with professionalism.

How do you achieve professionalism? Hard work! Complete and total involvement from all supervisors—from management, from the very top to the very bottom, to the guy driving spikes, to the janitor. This involvement must be sincere. There should never be any doubt or question in anyone's mind that top management is dead serious about safety. You absolutely cannot afford to overlook anyone when it comes to accident prevention and safety. Actually, when we talk about total involvement in safety, we're really talking about motivation. We really need to get out and motivate everybody. This can best be done by sincerity, by letting people know that you do care and that you expect them to perform professionally.

Many people, supervisors as well as employees, feel that safety is really not for them. Safety is for the other guy, I don't need it. We have a few supervisors who think safety is strictly for the safety supervisor. I said, a few. We have weeded out about 99.9 per cent of them, and the others are getting the message pretty fast. I just don't feel there's any place in our organization for anyone who doesn't believe in safety! You cannot reach professionalism in safety or any other respect with that line of thinking—your safety performance will reflect that type of thinking, too.

Accident prevention and safety take team work—everybody working together to get the job done. Safety and efficiency go hand in glove. Preventing accidents is nothing more than good business.

You have to accept the challenge of safety—you must honestly and vigorously pursue your role as a professional in preventing accidents. If you do not, I sincerely suggest you not put off any longer changing your ways.

As I previously mentioned, safety and efficiency go hand in glove. A good, safe operation is a good, efficient operation, and this affects the bottom line. We certainly don't have to make any apologies for that.

Do you take pride in what you do? Do you sincerely believe in safety? Do you believe that accidents can be prevented? Do you live, eat, sleep, and work safety? If you do, you are most likely a professional in your job, you most likely have a good safety performance. You undoubtedly are putting into your job much more than the ordinary man does. But on the other hand, you don't reach professionalism by being ordinary.

Another area or ingredient so vital to safety is attitudes. Attitudes of those under your jurisdiction, the people doing the work. If you have employees with poor or sour attitudes, you have problems. You need to make every effort to determine the cause of these poor attitudes. Remember, sour attitudes don't only affect your safety program and your safety performance, they also affect your efficiency and production.

What can we do about this problem?

You first must determine the cause, and in all probability you'll discover the communications have not been what they should be. Consequently, you should improve communications with your employees. Recognition of those who do a good job can be a factor in attitudes. When was the last time you complimented someone working for you? Do you recognize it when your people perform professionally? Do you tell them about it? I'm confident we're all a bit lax in that respect. Those things seem to be taken for granted.

I don't think the problems on the Santa Fe, insofar as safety is concerned, are any different from your respective properties. People problems—human error, human failure. Failure to comply with safety and work rules. People's habit of short circuiting the system or procedure.

These failures, unfortunately are occurring because supervisors have allowed their people to develop poor work practices and poor work habits. When you analyze the entire problem, you immediately discover still one more failure: supervision's failure to see what they are looking at. We need to train ourselves to see and to recognize these failures—these failures we see so often in reports of accidents and injuries. We need to see and recognize short cuts, the poor work habits and poor practices. We need to see them "before the fact." This is accident prevention. This is managing safety. This is my theory of reaching the status of professionalism in safety. Being a professional is being on top of, knowing what's going on, having things under control.

As far as I'm personally concerned, every accident must be investigated to determine the cause. In fact, the only good thing that comes from an accident is that you are able to prevent recurrences.

Professionalism means people performing their job safely. This can be achieved by good training programs and knowledge of the rules. Professionalism means that you know your problem areas, and that brings me to the eye protection program.

About June, 1976, we recognized that we were having too many incidents of injury involving the eye. In fact, the leading cause of accidents and incidents were eye injuries. The people involved were mostly train, engine, and yardmen. For the most part, these were foreign objects in the eye. Primarily, these incidents were occurring on territories in dry, hot, and dusty country. We were having many enginemen with foreign objects in their eye on those divisions where heavy braking and sanding is required.

You cannot sit by and do nothing when it comes to accident prevention and safety. You won't prevent accidents by doing nothing, so we decided to go to a total eye protection program.

Safety glasses or goggles are not new, of course, as our shop people have been wearing them for years. This, however, was not the case with train, engine, and yard employees. We knew that many train, engine, and yard employees would not like the program, and we knew we would hear from the labor organizations, and we did.

When we were making plans to implement the program, the general managers and the safety officers indoctrinated the general chairman. This was done by showing appropriate eye films—illustrating actual injury cases where the wearing of glasses had prevented serious injury to employees. This same indoctrination was then presented to the employees of the divisions. At that time, the safety glasses and the various type side shields were placed on display. We also had representatives from the safety glass companies on hand to explain their products.

Our safety supervisors were trained in fitting glasses and were equipped with the kits to be able to make repairs to the plano safety glasses. They also became very effective demonstrating the difference between industrial safety lens and street glasses.

Implementing a program such as this on a large railroad is no simple task. Not everybody was completely satisfied. Mistakes are bound to be made. For example, we put side shields on our operating employees. We feel that this was a mistake. Consequently, that feature is now optional with that craft. We only had two styles of safety glasses, which was a mistake. We are now in the process of correcting that. I'm sure there are still some other things we could have done differently, and no doubt we will make changes from time to time.

The safety eyewear program really is not different than the safety helmet (hard hat) to many. We used to get all sorts of complaints regarding the hard hats. However, you never hear any more complaints about them. After a while, we will experience the same thing with the eye protection program.

We really got started in late 1976 on some territories, but the entire railroad was pretty well covered by February 1, 1977. Since that time we have had a 55 per cent reduction in eye injuries. You cannot implement this type of program overnight. It takes time to get the bugs out.

I'm not here to sell safety glasses, nor do I have any interest or stock in those companies, but if you're having eye injuries, I know how most of them can be prevented: Put glasses on your people. The results can be very gratifying.

As we say on the Santa Fe—we keep moving for a better, safer way.

# TOTAL EYE PROTECTION

By LARRY CENA
Vice Pres., Operations, Atchison, Topeka, & Santa Fe Railway,
Chicago, IL

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# GRADE CROSSING SAFETY — THE BAY LINE WAY

By MILTON B. HOLLOWAY
Director of Safety & Public Relations,
Atlanta & St. Andrews Bay Railway Co., Dothan, AL

Three years ago this past April, I was returning from the scene of an automobile railroad crossing accident when I began to wonder what was going to happen about such accidents on our little 82-mile railroad. For this was the fourth week in a row that an accident had happened each Friday within our segment of railroad in the State of Alabama, comprising some 20 miles.

I wondered as I traveled back to the office from having taken pictures at the scene of the accident what could be done to emphasize to the motoring public that railroads still operated trains.

On Monday morning I called the Association of American Railroads and learned that the Southern Pacific owned a film called "Safety Facts About Crossing Tracks." This good company was generous enough to lend me this film some three weeks until such time as our company could purchase some of them. And it was in May three years ago that a television station in Panama City, Florida, was generous enough to show "Safety Facts About Crossing Tracks" that Saturday afternoon after a major sporting event. The next week, a television station in Dothan, Alabama, was also generous enough to do the same thing. Thus, began the Bay Line's own little Operation Life Saver Program. At that particular time I was not aware, nor was anyone connected with our company aware, that such a thing as Operation Life Saver Program ever existed anywhere. We did not think of ours in that respect either. It was begun purely as a means of trying to reduce accidents on our property when in the course of that year 18 grade crossing accidents occurred on our 82-mile railroad.

From this humble beginning of borrowing a film, we took advertisements in the Sunday papers of a grade crossing nature. We bought enough film to give to every school system in a three-county area we serve. Television stations were most generous in giving us time, any time, that we needed to put forth the story that, as the ICG film so aptly puts it, anytime is train time and that they run in both directions. We were able to get law enforcement officers, newspaper reporters, and television news men to ride our trains and see first hand why accidents occur at railroad crossings.

Other than the quarter-page Sunday advertisements or public service messages about grade crossings, and the initial purchase of the film, we spent very little money. The television time was donated to us, beginning with guest appearances on talk shows showing any type grade crossing film that we could either borrow or buy. In the first 12 months' time, our grade crossings had been reduced from 18 to six. This was an almost unbelievable reduction; however, it was true. In the next year, we had a double header, in other words we had a two-in-one accident. While we were waiting for the wrecker to pull the automobile off the front end of the lead locomotive of the long freight train, a drunken driver with a stolen vehicle ran into the train back about the flashing-light-covered crossing.

As I said, that year there were eight grade crossing accidents in a 12-month period. However, the past year has shown the most remarkable decrease of any year yet or of any year in the entire history of the railroad insofar as our records indicate. We reduced the number for the entire twelve-month period to three. It

seems also incredible due to the fact that our 82-mile railroad is located in one of the ten fastest growing areas in the United States today. I would say that the population has increased some one-third in the last three or four years. And, of course, with it motor vehicle traffic has increased.

It seems almost unbelievable to think that some four or five television appearances a year on four television stations and a once-in-awhile write up in the two leading newspapers, one at each end of the 82-mile railroad, could have accomplished this. Of course, there have been a few appearances at civic clubs and a great many drivers' education classes in high schools in the area in which we serve, bus driver seminars conducted by state education departments, and county school bus driver seminars in which we have participated.

I wonder how long it has been since you who are directors of safety, chief safety officers, or whatever the title might be, have climbed up in a lead locomotive of a long freight train and have stood there behind the locomotive engineer and watched as the cars sped across the crossing as you headed out on your run. I also wonder how long it has been or if there has ever been a time in your lives in which you were on 24-hour call to do the job of investigating a grade crossing accident. I wonder how long it has been since you were awakened in the middle of the night by the continuous ringing of the telephone and pick it up to be told, "We've had a bad accident 20 miles south of here; we've called an ambulance, and I expect you better come." I wonder how you would react to that if it were your lot in life today.

When you come from a small railroad, your job covers a multitude of sins, and it has been rather fascinating to me as I have been attending these conventions for the last few years to innocently ask a chief safety officer how certain things were handled on his railroad, to find that he was not familiar with them. On a small railroad, such as the one I work for, the job of safety man encompasses everything from settling personal injury claims to settling grade crossing accidents, investigating personal injuries, grade crossing accidents, investigating personal injuries, grade crossing accidents, being liason man or public relations man between the railroad and the shipping public. With all these duties there is never a dull moment.

I wonder just how much use you safety men are making of your own public relations departments. How long has it been since you, in the company of a public relations man, have called on a television station program manager or director and told him quite honestly the dilemma you faced in that particular area insofar as people running grade crossings and being hit, killed, and injured? I wonder if you are really making use of all that wonderful free time that is right out there waiting for you?

No one to begin with ever asked me to be on a television talk show. It was through the guidance and friendship of a fine education officer with the Florida State Highway Patrol that I was invited the first time to be on a noon talk show, prime time to talk about grade crossing accidents. It was from this one time beginning that I was sort of like a Fuller Brush salesman; I got my foot in the door and it couldn't be closed from that day on. Never in these some four years time that our program has been going on, never have I asked for time on a television station's program that it was not given to me. I has been so wonderful as I look back on it, I can't believe it really happened. All I've ever done was pick up the phone and call the program director or the hostess or the host of the show I was interested in putting forth a message to the public, telling them I had something different, I had something the public needed to see and to hear, and wondered if they could use me. The stock answer has always been the same: "When would you like to be on and how much time do you want?"

We've covered everything from vandalism to dangerous play on railroad tracks and grade crossings. We've shown everything that you wonderful large railroads have produced. We bought it or borrowed it. The television stations have taped many of your grade crossing films and have played them back whenever they had time to sandwich them in. But over the last few months I have had television hosts call and ask that we make ourselves available for taping a show to be seen at a later date. In every instance, the entire format for the program has been left up to me, and I've told them when and what to do and say and written the dialogue. I wonder how many of you safety officers have tried to work through your public relations department to get something like this going?

I sometimes think that we railroaders are the worst salesmen there ever were for our cause. Today, in our area, people are stopping for grade crossings and they are slowing down for them and our engineers are more conscious than they have ever been before of the dangers that lurk at each one of these crossings.

I don't think that we let the motoring public know enough about our companies and about what we stand for and what we are interested in. I don't think we let them know that the locomotive engineer who controls that freight Joe Doe ran in front of has just as much right to feelings as the grieving widow. Too little is said about how a locomotive engineer might feel when he is on a collision course and that he knows there is nothing he can do to prevent an accident. No one is really interested in knowing that. They are not interested in telling the true story too many times. I must say the newspapers in our area are quick to point out the fact that lights are working, that witnesses are available whenever such is true; whether it be the Bay Line, the Seaboard Coast Line, the Southern Railroad, or the L & N. They are quite accurate in their reporting and quite fair and honest. Again, I want to say I don't believe the safety officers of the railroads, generally speaking, are making the most of what is right there for the asking in the way of public service work from television stations.

Many of you are aware that in the late spring Senator John Sparkman of Alabama, at my request, introduced a joint resolution in the senate calling on the President to declare the last week in August National Grade Crossing Safety Week annually. Just before coming up here I was told by one of the aides that due to the work load of the Senate, there was little likelihood this resolution would be brought forth and voted on this year. However, that aide was quick to tell me the senator's file was still open on the subject and he was vitally interested in it. If someone would only request of him to introduce the National Grade Crossing resolution when the Senate convenes in January the senator would be more than happy to do so. I intend to do this, to write the letter and ask the senator to introduce the resolution again.

Many of you perhaps know Senator Birch Bayh of Indiana asked the senator if he could be co-sponsor of the resolution some weeks after it was initially introduced. Senator Sparkman told him he would be delighted for this to take place and his name was entered as co-sponsor of the resolution. When I write the senator to ask this resolution be introduced again in January, I won't be here to write any follow-up letters to you or anyone else; I will be retired from railroad service. But if you are really interested in getting a National Grade Crossing Safety Week to become a reality, it can be done. It can be done if you are serious about it, if you really want it to happen. If everyone on your railroad, from your president or chief executive officer right on down to your brakeman, will write a letter to your representative and to your senator asking them to urge this resolution be brought to a vote in both houses, it can become a reality well before summer comes. You will then have something to shoot for nationwide through the newspaper, television, and radio media, and it can perhaps reduce grade crossing accidents

more than any of us have ever dreamed possible. It can't become a reality unless you believe in it or unless you want to do something about it. If you do, as I said before, it can become a reality.

Many of you know Johnny Cash has agreed to do a taped grade crossing message for us and that through a contract mix up with CBS he has not been allowed to do it yet. But if you believe strongly enough in the value of this type of announcement, you won't let it die, you will keep working for it. And it, too, can become a reality.

If you will continue to make good grade crossing films available to the drivers' education classes in high schools throughout the country and to television news media and make yourselves available for civic club showings, PTA meetings, the message will finally get across to the motoring public that the best way to safe a life in a railroad crossing is to stop, look, and listen.

Too many discouraging things come to the railroad safety man. His job, perhaps among all the railroad categories, is one in which all the news coming in to him, generally speaking, is bad news. He receives notice of injuries, deaths as a result of injuries, he receives notices of derailments and property damage as a result therefrom and last, and certainly not least, he receives notice of injuries and of deaths at railroad grade crossings.

This brings to me a story that might help some of you when you get back home: During the 14th century in southeastern Europe, an emperor of a small kingdom and his army were soundly defeated by the forces of another nation. The emperor fled and took refuge in a barn, and as he lay there in the semi-darkness, he saw an ant trying to push a grain of corn up a stone wall. The grain of corn was much larger than the ant. As the emperor lay there he became fascinated and started counting the number of times the ant started up the wall. The ant would get the corn almost to the top, then down it would fall. This took place 69 times, and on the 70th time the ant pushed the grain of corn over the top of the wall. The emperor jumped up and was exhilarated with the thought of what an ant had been able to do and what he as a human surely should be able to do. He went down to reorganize his army. They fought the enemy and won their homeland back again. That may seem like a fairy tale to you, but sometimes I think we are too prone to give up too sóon.

In leaving I would like to bring out another little thought: In the Book of Psalms of the Holy Bible this verse has great meanings: "He that goeth forth and weepeth, bearing precious seed, shall doubtless come agaín with rejoicing, bringing his sheaves with him."



 

# PHYSICAL EXAMINATION STANDARDS

By ABBOT SKINNER, M.D.
Chief Medical Officer, Burlington Northern, Inc.,
St. Paul, MN

Physical examination standards have been used at various levels of government from those with national scope such as the military down to civil police and firemen. I don't really know, but suspect, that the origin of this procedure was to increase public safety and improve civil effectiveness. Industry, for many decades, has used physical examinations, perhaps overemphasizing their value in the achievement of productivity. Safety has been a little slow to be included as a prime reason. There is no question that at the present time it is the prime reason, since it is basically logical and realistic, and now safety has become a congressional edict. Let's face it: from the practical standpoint in the railroad industry, safety is our only ingress to achieve regulation.

Let's narrow the topic to standards, perhaps termed health or medical standards as opposed to physical standards, since psychiatric problems will soon become involved.

Why are medical standards important? Why is a national safety meeting important? Of course, this latter is broader and more obvious, but I like to think of the medical aspects as a significant part of your overall approach. Certainly, individuals with medical difficulties or problems must be placed in jobs where they can work with safety for themselves and others. What is unique about railroads? First, but not necessarily foremost, is our peculiar legal position under the Federal Employers Liability Act. Secondly, our people work in difficult environmental situations, both in terms of weather and geography. Thirdly, there is a multiplicity of jobs, many of which have unique specifications, and even these can vary from one railroad to another, such as the amount of heavy work that can be required of a clerk.

Once upon a time, long ago, the Medical Section of the Association of American Railroads developed a set of physical standards after hundreds of man-hours and many years of work under the guidance of Dr. Winston, but it was really too detailed and verbose. In February 1967, the publication was accepted by the Association of American Railroads as a guide and it has been used as such ever since. This was all done to promote uniformity, which used to have real legal pressure. Medical standards were considered the prerogative of the various railroad managements. A couple of years later, in 1969, the Secretary of Transportation appointed a task force to study and review railroad safety. This group included representatives of state agencies, management, and labor. The report included a recommendation that the secretary, through the Federal Railroad Administration, "have authority to promulgate reasonable and necessary rules and regulations establishing safety standards in all areas of railroad safety." Subsequently, the Railroad Safety Act of 1970 gave the secretary authority to issue rules, standards, etc., but only as related to safety, and this in no way prohibits collective bargaining agreements.

Further and specifically, they eliminated age as a standard which might disqualify for safety reasons. Shortly thereafter the Operations Transportation General Committee offered to help the Federal Railroad Administration in these areas, and a committee including medical, personnel, and labor relations officers proceeded to study physical qualifications. After these were approved

by the Association of American Railroads Board in 1971, they were submitted to labor organizations, which would not approve. Other consultations received a comment that the regulations were far too sweeping, and I would not personally contest this comment. Thus, back to the drawing boards.

The Federal Railroad Association, in its safety report to Congress in March 1976, included medical standards and employee qualification standards as an area of railroad safety to be studied with an eye to including these specifically as safety standards. The railroads believe that perhaps one of the causes for noncompliance with operating rules may, in some cases, be the medical problems, the physical inability of certain individual employees to act in accord with the rules. Our aim and leverage on this subject is to conform to other components of the Department of Transportation, such as the FAA, Coast Guard, and Bureau of Motor Carrier Safety and their medical standards.

Last year the Medical Section of the Association of American Railroads was suddenly asked to come up with a new set of standards. Our approach was based on the frustrating past history and what might be done as a new angle. We doctors are well aware that numerical standards are no longer realistic or even desirable, but of course, this leads to difficulty in interpretation and uniformity. Do you say the middle of the eye chart, not line 2 or 4? The general terms used in these standards are consistent with those of the other regulatory agencies, and we hoped would be fairly readily acceptable by labor and Congress as well as the regulating bodies with which we have been dealing.

In spite of the optimism of a year ago, the subject is again stalled in red tape and other committees.

Let me make it clear that we approve the philosophy, if not the mechanics, of affirmative action. We must and can logically and safely employ individuals with a great variety, an almost infinite variety of physical disabilities and medical problems. We are not opposed to hiring an epileptic, a diabetic, or an amputee, but they must be in positions where they can function safely. Obviously, some of these individuals would be very sharply limited as to occupation. On the other hand, there is no place for someone who faces a 90 per cent probability of death or total disability in the near future. That is society's obligation and should not be laid at the door of the transportation industry or any particular corporation. Some of the above seems a little paradoxical, but the cases can be analyzed individually as well with overall policies. Surely it is not unreasonable to have a firm policy in situations involving pregnancy, transexualism, etc.

We feel that we are being repeatedly backed up against a wall. But, we are still trying and are using a new tack. We have an outside consultant of wide reputation in work evaluation who, with consultation with various railroad supervisors, is developing a careful tabulation of the physical requirements of a number of occupations. It is up to the Association of American Railroads Medical Section to develop medical criteria applicable to these individual analyses. I am sure that this will take many months but appears to be the best hope for industry-wide uniformity.

After all, what is our goal? We want to provide fair and equal opportunities to applicants and employees, with an eye to reasonably certain effective work production. With reference points, standards, the medical departments should be able to be more efficient and less bogged down in challenges of discrimination which, on occasion, are little short of ridiculous.

This entire approach has the primary aim of safety for all with a corollary of a more productive work force, which in turn leads to a better industrial image as well as achievement. Safety is why we're here, and that's really what it's all about.





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# TRANSPORTATION TODAY

By KAY BAILEY
Acting Chairman, National Transportation Safety Board
Washington, DC

accidents and

In thinking over my possible remarks for today, I kept going back to a discussion earlier last summer which centered on the long range objectives of our nation's energy programs and the long term impact on various transportation modes. I was most impressed by a series of statistics generated by the Oak Ridge National Laboratory for a Department of Transportation study on energy-efficient measurement involving the use of British Thermal Units per ton-mile. Next to water-borne transportation, the most energy efficient was rail. Five, six, or sometimes up to ten locomotive units hauling 10, 15, or 20,000 ton payloads clearly topped the list. From these and other statistics of energy shortage anticipated in the U.S. for the future, I think it's very easy to get excited about the future growth rates of rail traffic. When we were in Duluth together at the AAR meeting in June, I talked in terms of the ups and downs of the industry. In fact, likened it to your light rail cousin—the roller coaster. Well, I don't think I'm too far wrong, and things do seem to be on the upward swing right now.

For instance, take a good look at the newer power units—General Electric's "C" power units and General Motor's 3600 horsepower "SD's"— tremendous hauling capacity. Also, look at the jumbo hoppers, the high-cube boxes, and for real load carriers—there are the new deep well flat cars. More and more efficiency—bigger and bigger loads.

From this energy shortage standpoint, everything looks favorable for the railroad industry because of its high capacity cars.

But it's not all that rosy a picture, as we recently had re-emphasized for us.

I vividly recall an accident which all started with the best of what I've talked about—five power units, all modern, with 110 cars. But, things weren't really rolling right along at all! Why? Well, with all of the magnificent rolling stock, modern and large, guess what was under the wheels? FRA Class 3 track with 70-year-old 90-pound rail sections, getting hammered by axle loads far in excess of intended design loads. Back in 1907, when it was rolled, stresses of this magnitude were not even dreamed of. This rail fractured under one of the cars and quickly broke into 11 pieces. At 40 miles per hour, the broken rail derailed the car's right wheel, then the left wheels dropped inside the gauge and a general derailment was in progress! The cars went down the embankment and smack into a 16,000 gallon petroleum tank filled with gasoline. One tremendous explosion later, that tank went up in a ball of fire and the three other 16,000 gallon tanks located nearby went with it. Propane tanks on the ground went up, then one LPG car punctured and torched off like a rocket. It shot back across to the other side of the track, setting other buildings on fire. Oil from one of the 16,000 gallon tanks plowed down the main street—a river of fire! There went any possible energy efficiency for that day—or profit—and with a tragic loss of life. A great train plus antique rails surely equalled disaster!

We were recently involved with another situation, again with heavy power units, with a mixture of tank cars containing anhydrous ammonia. This was a Class 4 track, right through the middle of town, and a rail turn-over was experienced on a curve. Instant chaos was the result. Here again, we determined part of the problem to be deteriorated ties

and inadequate inspection processes. This just seems inexcusable. How does this all affect the industry? What is the impact of the track and roadbed problem today?

A quick survey indicates that little or no improvement in average speed of freight trains has occurred in 20 years. Last year the average was 20.1 miles per hour! This flies in the face of the more powerful units. One significant deficiency is, of course, the track. The only way to safely operate on substandard track is to go so slow that you don't spread the gauge. Even then we fall off of the tracks all over the country. Our statistics show that over 60 per cent of derailment accidents the NTSB has investigated are directly or indirectly related to either a faulty track or faulty maintenance of track. As a matter of fact, we've been concerned for some time over the adequacy of federal track standards. There has been a definite reduction in maintenance over the past years, although improvement is apparent in some of the most neglected areas. This all seems to coincide, oddly enough, with the issuance of the track standards guidelines by the Federal Railroad Administration. We believe, and have determined a number of times since 1971, that the FRA standards, which are truly minimum standards, are now being used as the ultimate standard. "Why spend any more money than is required to meet federal standards?" All of us know these federal standards are simply not sufficient and leave little room for error—either mechanical or human. We in the Safety Board are continuing our pressure for an increase in the adequacy of the FRA track standards.

An interesting attitude has emerged—most everyone is concerned over the safety requirements associated with passenger traffic, but there appears to be an under current of indifference to the protection of freight traffic. Take a look at the relegation to some secondary freight routes of the older rail sections and hand-me-down ties! This, of course, results in the increased exposure to catastrophic accidents as a direct result of the increase in movement of petroleum and chemical products representing hazardous materials.

You in rail, unlike highway builders, have had little opportunity in the past few years to choose where the right of way goes in relation to population centers. The towns and cities have come to you. So while in many cities the truck routes, and specifically hazardous materials routes, are well outside the high density belt of the communities—you have the exact reverse! An accident for you in a populated area is potentially a catastrophe. Where does it leave you? You've got to make sure of your procedures to protect yourself and the public. The humping operational procedures of the past which included loaded tank cars of all types have been changed to reduce the risk of tank-head punctures. There was always the possibility of an accident and, of course, when it happened in East St. Louis and in the Englewood yards in Houston, with the LPG cars, the sky lit up for miles around; lives needlessly lost, injuries in the hundreds and property damage in the multi-millions.

I've continued to be interested in the positive impact on safety that carefully monitored and controlled training can have. I've been concerned over the restriction often placed on how much and how often training is provided to rail employees. Not just the engineer and the traincrew but also the track crews. Time and again our investigations reveal a lack of understanding of the rules in the case of the operating employees and the technical requirements from the track repair and signal men. I know there have been many problems associated with training; a major concern has been that training might be used as a means of disqualifying employees, leading to disciplinary action and release of the employee. We are now working with a number of carriers and with their unions to develop an in-depth analysis of the





type, amount, and quality of training now prevalent in the industry. I think we will find that the time is ripe to move forward to increase training and to improve safety through this critical human factor.

To meet the challenges of an energy conscious future, I believe, the two areas most in need of improvement are tracks and training.

Thus far I've talked about the negatives—now, let's be positive. And there is a lot going on that's good.

As some of you are aware, the Safety Board has recently become very involved with a program called Operation Lifesaver. It all started when I accepted a commitment to give a presentation last August before the National Conference on Railroad-Highway Crossing Safety out in Salt Lake City. Like most of you, my first reaction was—ugh—so what can you do? You have tracks that have been crossing a particular road for almost a hundred years, and most people for miles around know it's there and even know the schedule of the daily trains. You put flashers on crossings—sometimes stop signs—and what happens? People don't stop, don't look, and don't listen! They drive right across in the path of the same huge trains we just talked about.

The national statistics seem to bear out a defeatist attitude—they don't seem to change. For the past few years, the grade crossing fatalities have hovered in the 11-1200 per year bracket. This is in spite of enormous efforts by many state and Federal agencies—and the individual rail carriers. However, in working on my Salt Lake City presentation, I did run across Operation Lifesaver—and it really looks good. We found that eight or nine states had built their program on the principles of education, engineering, and enforcement which is the total overall plan of Operation Lifesaver. A number of other states used only a portion of the program, usually public relations education. But the most startling results appeared in four of the states which were among the first to adopt the full program. The first year results of these combined states were a drop in fatalities from 144 of the year prior to activation down to 69 in the first year of the program; a 52 per cent drop in fatalities. Is this really all that good? Can we count on a 50 per cent drop in fatalities from Operation Lifesaver? The answer is, "We don't know"—the statistical base is small. Further, each state goes about it somewhat differently. So, no guarantees. But it represents a positive achievable step which can be taken by a state, working in direct cooperation with the rail carriers. When followed up throughout the year, and year after year, it will help. Georgia has had excellent results, but kept up the pressure on the program for two straight years. They had a 63 per cent drop the first year, down again for the second year, and this year, still going down.

From this evaluation, our board members decided to allow our staff to act in a catalytic role. Our job in our field offices is to work with the states, the highway departments, enforcement, and the rail carriers. We're in a natural position to help.

Our Washington staff and our field offices with surface expertise—nine offices around the coutnry—will be talking to the safety directors of the states and to the associations involved with education. I think we can afford the extra effort to become advocates of Operation Lifesaver. Through this, our recommendations come alive.

The National Safety Council has the ability to put together the suggested program, and we are working with them. This includes the slide presentations for schools, the film clips for TV, the curriculum for education inclusion, the art work for the ads, and the "kit instructions." This really is the distillation of past experience of the railroads, states, and individuals.

I've discussed both the what's "wrong" and what's "right." There is much to be done in this railroading world. We in the NTSB call the shots as we see them; that's our job and we will continue. Conversely, where we can be active participants in the

positive side, we're doing that, too. I sincerely believe that you need our help—and we need yours. It's working together for the common goal, safety; that's what counts.





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March 21, 2001

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