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Federal Mine Safety and Health Review Commission
Office of Administrative Law Judges

SECRETARY OF LABOR, MINE SAFETY AND HEALTH ADMINISTRATION (MSHA), PETITIONER	Civil Penalty Proceeding Docket No. HOPE 78-722-P A.O. No. 46-01398-02020F
v.	Shannon Branch UG Mine
ALLIED CHEMICAL CORP., RESPONDENT	

DECISION ON REMAND

Statement of the Case

On December 19, 1980, the Commission issued its decision in this matter and remanded the case to me for further proceedings for the limited purpose of making findings concerning the following items which apparently troubled the Commission during its consideration of the appeal taken by MSHA, and the items listed are quoted from pgs. 5 and 6 of the decision and remand:

> 1. Although the judge found that "the locomotive had a dual braking system installed . . .," he did not explicitly determine what constituted the pneumatic portion of the dual braking system. We believe that the judge should have made explicit findings as to whether the truck emergency brake and its air supply were part of the pneumatic braking system. The failure to determine whether the truck emergency brake was part of or independent of the pneumatic braking system leaves unanswered the major factual issue in this case, whether the dual braking system was operable. If the truck emergency brake were found to be part of the pneumatic system, questions remain as to whether it was operable in these circumstances and could have supplied air to the brake cylinders.
>
> 2. Therefore, we remand to the judge for further proceedings. Specifically, we remand for a finding as to whether the dual braking system was operable. In order to make this ultimate finding, findings are also necessary on why the primary pneumatic brake failed to stop the train after the electricity was interrupted; whether the truck emergency brake is part of the pneumatic portion of the dual braking system; and, if so, why it failed to stop the train.

Discussion

The alleged violation of 30 CFR 75.1404, is stated on the face of the citation issued on September 9, 1977, and the conditions described by the inspector are as follows:

> The pneumatic braking system on the No. 20 locomotive being used for coal haulage purpose was not sufficient to control a trip of 28 loaded mine cars which were involved in a run-a-way trip. The brake shoes were not properly aligned with the trucks and could not apply uniform frictional pressure on the braking surface. The linkage for the manual brake was disconnected completely. 75.1404.

30 CFR 75.1404, a statutory provision dealing with automatic brakes and speed reduction gear, provides as follows:

> Each locomotive and haulage car used in an underground coal mine shall be equipped with automatic brakes, where space permits. Where space does not permit automatic brakes, locomotives and haulage cars shall be subject to speed reduction gear, or other similar devices approved by the Secretary, which are designed to stop the locomotives and haulage cars with the proper margin of safety.

30 CFR 75.1404-1, a regulatory standard dealing with braking systems, provides as follows:

> A locomotive equipped with a dual braking system will be deemed to satisfy the requirements of 75.1404 for a train comprised of such locomotive and haulage cars, provided the locomotive is operated within the limits of its design capabilities and at speeds consistent with the condition of the haulage road. A trailing locomotive or equivalent devices should be used on trains that are operated on ascending grades.

As stated by me during the course of the hearing, the critical issue in this case is whether the petitioner (MSHA) has carried its burden of proof in establishing that the pneumatic braking system on the locomotive in question was sufficient or adequate to control the trip of cars it was pulling on the day in question (Tr. 54). Petitioner has the burden of establishing that the braking system was in face inadequate. In my original decision of April 3, 1979, I specifically rejected any notion that petitioner had established a casual connection between the brake shoe condition described by the inspector on the face of the citation and the failure of the locomotive to stop, and specifically found and concluded that petitioner had not proven by a preponderance of the evidence that any misalignment of the brake shoes adversely affected the braking capacity of the locomotive on the day in question.

It should be noted that respondent was not charged with a violation of section 75.1404-1. The initial alleged violation of section 75.1404 was based on the inspector's belief that the locomotive pneumatic braking system was not sufficient to control the trip of cars it was pulling on the day in question, and his belief that asserted misalignment of the brake shoes and disconnected manual brake somehow contributed to his conclusion that the braking system was insufficient. Since the locomotive in question had a dual braking system consisting of a dynamic system and a pneumatic system, rather than automatic brakes, reference must be made to section 75.1404-1 in order to determine whether the dual braking system on the locomotive in question met the requirements of section 75.1404-1, and if it did, then it necessarily follows that respondent has complied with the cited section 75.1404 requirements. However, throughout this whole examination of the interrelationship of these standards, it should be kept in mind that the burden of proof is on MSHA, not the respondent.

In its brief filed with the Commission on appeal, petitioner took the position that in order to establish a violation of section 75.1404-1, it may show (1) that the locomotive was not equipped with a dual braking system, (2) that the locomotive was being operated beyond the limits of its design capabilities, or (3) that the locomotive was being operated at a speed inconsistent with the conditions of the haulage road. The petitioner conceded that it never alleged that the locomotive was operated at excessive speed or that it was operating beyond its design capabilities and that these issues are not present in this case, and I specifically made that finding in dispatching petitioner's arguments on these points.

It would appear to me that the parties may have read into my decision a conclusion that I based my decision vacating the citation on a cursory finding that once it has been established that a dual braking system was in fact installed on the locomotive, respondent must prevail. As a matter of fact, the thrust of petitioner's arguments to the Commission on appeal is the assertion that I concluded that the mere presence of a dual braking system satisfied the requirements of section 75.1404, and in support of such a conclusion, petitioner cites "numerous occasions" during the course of the hearing where "the judge gave indications that he believed the regulation in issue required only the mere presence of a dual braking system" (citing Tr. 101-102, 109, 115-116, 182, 237). In short, petitioner believes that I concluded that the presence of defective or misaligned brakes was irrelevant, as long as the dual braking system was installed on the locomotive.

In retrospect, I can understand how the parties may have concluded that this was the basis of my decision. Although my decision contains a detailed discussion concerning the somewhat superficial after-the-fact investigation conducted by MSHA with respect to the condition of the locomotive brake shoes, and although I specifically found that MSHA had failed to establish a nexus between the asserted defective brake shoes and the braking

capacity of the locomotive on the day in question, by

simply adopting respondent's arguments that section 75.1404 and 1404-1 are merely "design" criteria, the parties may have been misled in believing that this was the crucial focus of my decision.

I have carefully re-examined the transcript references referred to by the petitioner to support its assertion that I believed the mere presence of a dual braking system, whether defective or not, satisfies the requirements of section 75.1404-1. While it is true that my inquiries focused on design capabilities, they were made in the context of the manner in which petitioner's counsel was developing his theory of the case, namely that the presence of misaligned or worn brakes ipso facto established that the locomotive was not being used as originally designed. The transcript references follow below.

(Tr. 101-102)

> JUDGE KOUTRAS: Okay. Because what we've got so far is it is MESA's position apparently that the misalignment of the brakes and the disconnected linkage on the parking brake, those two conditions were in violation of 75.1404 and/or .1404-1.
>
> MR. MORAN: Yes, in that those systems were -- primarily the former system was unable to adequately control the locomotive with the number of cars it had on that trip.
>
> JUDGE KOUTRAS: Notwithstanding the fact that the locomotive itself may be designed to operate within its designed capabilities, et cetera. In effect, what your argument is there were some worn brakes and misalignment of a brake here; therefore the locomotive was not designed to do what is intended.
>
> MR. MORAN: That's right.
>
> JUDGE KOUTRAS: Would that also apply to brakes that are worn as a normal everyday wear and tear situation?
>
> MR. MORAN: Yes. If the weekly inspections are carried out, that would disclose a condition like that, and obviate a violation of that.
>
> JUDGE KOUTRAS: It might disclose it but not necessarily result in correction of the condition.
>
> What I'm saying is if the inspector happens on the scene one day and inspects a locomotive and he finds some worn brakes on it, does he immediately come to the conclusion that that locomotive is not designed to do what is intended, simply because there are some worn brakes on it?

MR. MORAN: No, but if the brakes are misaligned -- if he determines they are not capable of not stopping the locomotive, then he would issue a violation of 75.1404-1.

(Tr. 109)

JUDGE KOUTRAS: You don't know of any such requirement of policy. Okay.

Let's go back to the objection now. I digressed a little bit. See if you can develop a few more facts. What we are talking about is a specific incident here. Now the operator in this case is charged with using a locomotive which, MESA -- MSHA claims was not operating within its capabilities. In other words with a faulty brake mechanism on it.

So, what I'm concerned about and what we all should be concerned about is whether or not this particular locomotive, on this particular day, under the conditions which prevail, was it in fact operating within its limits or not?

So, if we can get a little bit more information; like did anyone make a judgement as to how fast this thing was traveling, or what the loads were?

BY MR. MORAN:

Q. Mr. Smith, did you consider on issuing your order the number of trips, the number of cars involved in the trip?

A. No, sir.

(Tr. 114-116)

JUDGE KOUTRAS: Let me ask you, Mr. Moran, this question.

Assuming you've got brake shoes, brakes, wheels, dual braking systems, the whole bit for a locomotive in a mine, and that's all up to snuff. It meets the specifications -- the braking system. Someone evaluated the locomotive, the way it's used in the mine on a daily basis, and they decided that this braking system is up to snuff. As a matter of fact, let's assume again for this hypothetical MSHA looked at it, inspected it and gave its stamp of approval on it.

For some reason the locomotive is down at maintenance. It's in the maintenance shop and the mechanic is putting the wheels and putting the brakes back on, et cetera, et certera.

For some unknown reason he puts them on backwards and they are misaligned, and the inspector walks in the mine, sees that condition and cites a violation.

Would it be your position then that that particular locomotive is not designed, et cetera, et cetera, et cetera as .1404-1 requires?

MR. MORAN: Yes, that's our position. That is a violation of 75.1404.

If the braking system, although it's great, if it is put on wrong then you don't have an effective braking system.

JUDGE KOUTRAS: You don't view that as a separate violation, separate from the --

MR. MORAN: Well, there's no other regulation that provides for that sort of thing.

JUDGE KOUTRAS: Well, that's part of the problem here. Maybe there should be. Maybe in the Secretary's infinite wisdom when he set up a .1404-1, he should have a -2 to cover that situation. So, what you're doing now is your --

MR. MORAN: It depends on one individual's reading of .1404 versus another.

JUDGE KOUTRAS: That's right. And it takes a lot of straining I might add, to get to the conclusion that the hypothetical I just gave you does to the design capabilities of the locomotive, as the standard itself is written and as embellished by .1404-1.

MR. MORAN: Well, we're getting into an extended legal discussion. It's from my point of view -- to state that you have an operative dual braking system which is improperly aligned, it can't do the job of stopping the locomotive, then you have a violation of 75.1404. What's the point of having the system if it's not on there right?

JUDGE KOUTRAS: Okay.

MR. MORAN: It seems to be an implicit but common sense interpretation of 75.1404-1.

JUDGE KOUTRAS: That remains to be seen.

MR. MORAN: That is the Secretary's position.

After careful review of the aforementioned transcript references, I honestly fail to understand how the petitioner can represent that they support a conclusion that my decision was based on the primary premise that the presence of a dual braking system per se can constitute compliance, with no regard given to whether the dual braking system was effectively operable. Petitioner's cited transcript reference at pgs. 182 and 237 are omitted because they lend absolutely nothing to petitioner's arguments in this regard. Further, petitioner's piecemeal transcript citations, taken out of context, are of no value to any rational consideration of the basic problem in this case, a problem that stems from standards which lend themselves to several interpretations, compounded by the fact that MSHA simply failed to prove a case, and my observations made during the hearing which appear as follows at pgs. 183-184, are in my view still applicable in this proceeding:

> JUDGE KOUTRAS: I get the distinct feeling from this case, from what I've heard so far, that we found some defective brakes that were inoperable; that possibly if it had not been for the fact of the loss of power in this locomotive it probably would have done the job that day and we wouldn't have had the citation, and there wouldn't have been any question but that the locomotive was doing its job that it was designed to do.
>
> JUDGE KOUTRAS: I get the further distinct feeling in this case after we go through the investigative process and interview all these people, and we find that the brakes are worn and all this, and we know that, "Look, here is a fatality. There is a violation someplace. Let's look around and see what section we can find to hang it on."
>
> And 1o and behold 75.1404 rears its head. I get the distinct feeling from the testimony I have heard that that is precisely what happened in this case.

I believe that a closer examination of the record will show that my ultimate decision in dismissing this case was based on the fact that petitioner failed to establish by a preponderance of the credible evidence adduced in support of its case that the brakes were in fact defective or that the asserted defects rendered them inadequate to control the locomotive. Inspector Smith testified that he issued the citation on the basis of the fact that he believed the faulty conditions of the brakes rendered them inadequate to control the locomotive (Tr. 118), and that if he were to conduct another inspection and find a locomotive with the same brake conditions as those he observed, he would conclude that the brakes would be inadequate to stop the locomotive, even though it had no trips coupled to it (Tr. 111). In short, the inspector did not divorce the alleged brake shoe defects from his conclusion that the dual braking system was rendered inoperable because of these asserted defects, and neither did I. I simply

concluded that petitioner had failed to establish through any credible evidence that the cited defective brake shoe conditions had anything to do with the failure of the locomotive to stop before it derailed. I am still of that view.

Locomotive braking systems - definitions.

The Dictionary of Mining, Mineral, and Related Terms, U.S. Department of the Interior, 1968 Edition, contains the following definitions:

> dynamic. Forces tending to produce motion.
>
> dynamic braking. A method of retarding an electric winder or haulage in which a direct current is injected into the alternating-current winder motor stator during the deceleration period; the motor then acts as an alternator and the negative load of the winding cycle is absorbed as electric power and wasted as heat in the controller. Compared with reverse current braking, it saves power, but the energy dissipated in braking is again wasted in the rotor resistance. See also electric braking.
>
> electric braking. A system in which a braking action is applied to an electric motor by causing it to act as a generator.
>
> pneumatic. Set in motion or operated by compressed air.
>
> airbrake. A mechanical brake operated by air pressure acting on a piston.
>
> mechanical brake. The brake in which the brakeshoes are pressed against the brakedrum by mechanical connections.
>
> auxiliary. A helper or standby engine or unit.
>
> compressed air. Air compressed in volume and transmitted through pipes for use as motive power for underground machines.
>
> compressor. a. A machine, steam or electrically driven, for compressing air for power purposes. Small air compressors may be compund steam and double-stage air. Large compressors may be triple-expansion steam and three-stage air and always used with condensers. b. Any kind of reciprocating, rotary, or centrifugal pump for raising the pressure of a gas. d. A machine which compresses air.

> air compressor. A machine which draws in air at atmospheric pressure, compresses it, and delivers it at a higher pressure. It may be of the reciprocating, centrifugal, or rotary (vane) type.

Locomotive braking systems - testimony.

Petitioner presented the testimony of MSHA Inspectors James E. Kaylor and Gerald F. Smith in support of its case, and they explained what they believed to be the braking mechanisms on the locomotive in question. Respondent presented the testimony of William E. Funsch, a General Electric Representative whose experience includes the design of locomotive braking systems. He testified that the locomotive in question had four independent braking systems, consisting of a dynamic brake, straight service or pneumatic air brake, truck emergency brake, and a parking brake. The "parking brake" is the manual mechanical brake referred to by the witnesses, and it consists of a screw device which jacks the brake shoes against the wheels. It is not used to stop the locomotive once it is in motion because it takes too long to operate the screwing device (Tr. 241).

It would appear from all of the testimony adduced in this case that the locomotive in question had at least four identifiable methods of braking, and a discussion of these systems, including a recapitulation of the supporting testimony, follows below.

The dynamic braking system

Inspector Kaylor described the locomotive dynamic brakes as follows (Tr. 69-70):

> A. Dynamic brakes is a reversal of the polarity of your motors to give a braking effect, but it is not a brake. But it's a -- gives you a braking effect.
>
> Q. It's kind of like shifting your car into low?
>
> A. Yeah. And it doesn't stop it, but it will slow it down, greatly.
>
> * * * * * * * * * * * *
>
> A. The dynamic brakes gives you a reversal of polarity. What it tries to do is reverse your motors -- or it will reverse your motors, in some motors. And it gives you a slowing down effect instead of locking the wheels and skidding the wheels.
>
> Q. Okay. It's like a drag on a motor. Isn't that a pretty good description of it.
>
> A. Yeah.

In describing the comparative efficiency between pneumatic and dynamic braking systems, Mr. Kaylor indicated that the dynamic system would be the better method of slowing down a locomotive, and if he were operating it his practice would be to attempt to slow it down by use of the dynamic motor brake drag and then revert to the pneumatic or air brakes (Tr. 69-71). He confirmed that air was required to operate the dynamic braking system, and he indicated that "jockeing" or "tapping" the pneumatic air brakes will deplete the air supply. In the event of loss of electrical power the air compressor will stop, and subsequent "tapping" of the pneumatic brakes will deplete the air supply (Tr. 72-73). In describing the way the dynamic system functions, Mr. Kaylor stated as follows (Tr. 74-75):

> A. Well, I know a little about it. You've got contactors in this particular motor that is operated by air through a solenoid or a --
>
> Q. So you've got some contactors that need to make contact to operate the electricity, the internal function?
>
> A. Right.
>
> Q. And the contactors are designed to operate by air.
>
> A. Right.
>
> Q. Okay. So if you lose your air, even though you call them electrical brakes, they function through the use of air, also.
>
> A. Partially, right.
>
> Q. Well, you need the air in order to make the contact which is making the electricity flow?
>
> A. Right.
>
> Q. So if you lose your air, you lose your dynamic brakes. So, Tom Williams -- as you mentioned -- you called him, Tom -- if Mr. Williams is coming down that hill, once he lost that electricity, the harp came off. It no longer could connect up. What's he left with?
>
> A. Well, he's left with -- depending on how much air he had in his tank, he's got that air in that tank and however he used that air and when it's gone it's gone.
>
> Q. Okay. So what he's got left, X thousand feet up the line, when the trolly wire comes off is what's in the tank.
>
> A. That's right.

* * * * * * * * * * *

A. When you have power, air compressor builds your pressure up to a certain point. All right. All the time that you are operating this motor when you are using a certain amount of this air this compressor is kicking on and building this pressure back up to that certain number of pounds that's held in this tank.

Q. Okay. It could be ninety, hundred, hundred ten pounds of pressure as an example.

A. Yeah, different size motors.

Q. Do I understand what you are saying is as long as you've got your electricity -- assume the trolly wire is operating, the trolly pole is operating properly -- you can use air however you want to use air and the compressor still keeps filling up.

A. It's --

Q. That's the way the compressor and the whole system is designed.

A. Right.

And, at Tr. 80(g) and (h):

Q. Okay. Assume you have a situation where the trolly harp assembly becomes disconnected from the wire, okay?

A. Okay.

Q. Is it correct for me to understand that at that point in time the compressor is no longer filling up the air tanks?

A. Right.

Q. Okay. Is it also correct to assume that you have a limited amount of air at that time?

A. Right.

Q. Okay. Now, Mr. Feinberg tried to bring out that point in time that you would not have more brakes, but that is not quite correct, is it?

A. No, sir. It's not correct.

Q. Okay. The fact that if you applied the brakes, you apply the pneumatic brakes one time, you may not be out of air, is that correct?

A. That's right.

Q. All right. In other words, the ones he used to tap on the brakes will not necessarily exhaust your entire braking power.

A. One tap on the brakes would not exhaust it.

MSHA Inspector Smith testified he was familiar with the braking system on the locomotive in question and confirmed that it was equipped with a dynamic braking system. Both he and Inspector Kaylor confirmed that "electric brake" is the same as a "dynamic" brake. Mr. Smith confirmed that the purpose of a dynamic system is "more or less a speed reduction", similar to "downshifting a car", which slows down a locomotive rather than bringing it to a stop. He also confirmed that the locomotive in question did not have an automatic brake, but was equipped with a dual braking system, namely, a pneumatic or air brake, and a dynamic brake (Tr. 86-87).

The pneumatic braking system

Inspector Smith described the pneumatic braking system as follows (Tr. 87-88).

Q. Was this locomotive, No. 20, equipped with automotive [sic] brakes?

A. No, sir.

Q. It did have a dual braking system, is that correct?

A. Yes, sir.

Q. Do you consider one part of the braking system to be the dynamic brake?

A. Yes, sir.

Q. What would be the other part of this dual braking system?

A. The pneumatic brake.

Q. The pneumatic brake is also call [sic] the what of brake?

A. Air brakes.

Q. Would you briefly describe the way the pneumatic or air brake operates?

A. Well, it's a air system which has a valve, which you disperse the air to the cylinder, which in turn apply pressure to the brake shoes, which in turn they apply pressure to the trucks of the locomotive.

Q. And as I understood from earlier testimony -- correct me if I'm wrong -- this system operates on a compressor which is operated by electricity?

A. It does.

Mr. Funsch described a pneumatic brake as follows (Tr. 247):

A pneumatic brake system works by supplying air from two main reservoirs on the locomotive, through a brake valve. When you move the brake valve, it allows air to flow into four brake cylinders. The brake cylinders exert a force as a piston, which moves a lever, which has lever ratio. It pushes the brake shoe against the wheel. The brake shoe against the wheel generates friction, which retards the rotation of the wheel, and slows the train down.

And, at pg. 263:

Q. You've heard talks about Standard 75.1404 requiring a dual braking system?

A. Yes.

Q. Does this locomotive have what you -- in your expertise -- consider a dual braking system?

A. It does. I would consider the dynamic brake and the service brake meeting that requirement.

Q. Service meaning what we've been calling as the air brake, or pneumatic brake?

A. Yes.

Q. In fact it's got a couple more brakes too. But it is at least a dual brake system?

A. Yes.

The auxiliary or "safety" braking system

Inspector Smith referred to an "auxiliary system" used in connection with the pneumatic brakes, and he described it as follows at pg. 88:

> Q. Is there any sort of an auxiliary system in connection with this pneumatic or air brake?
>
> A. Yes, sir.
>
> Q. Would you describe this auxiliary system?
>
> A. Yes, sir. It's a separate tank, air tank, that is used to, when the pressure in the system drops down to a certain level, what air is in this tank then will be dispersed to the air system, which would set the brakes.
>
> Q. Then is it considered to be a safety system which provides additional air when the main system has bled out to a certain pressure level?
>
> A. Yes, sir.

And, at pgs. 134-135:

> Q. Now the auxiliary brake that you keep mentioning doesn't have anything to do with this .1404 either, does it?
>
> A. These locomotives were designed with the auxiliary system on it, so I would assume that they were designed to -- for their capability --
>
> Q. It's a fourth brake though, isn't it?
>
> A. No, sir. That's a safety -- that's a safety feature of the pneumatic system.
>
> Q. It's not called the safety brake?
>
> A. Yes, sir, you might imply that.

Further, at pgs. 137-137(a), 144-145:

> Q. And you agree with that, the conclusions from Mr. Kaylor in that discussion, that once you lost your electricity on this No. 20 locomotive, you've only got left the air in the compressor? You can't get anymore.

A. Not in the compressor. In the tank.

Q. In the tank, the compressor isn't running, so you can't get anymore into the tank?

A. Yes, sir.

Q. So you've got what you've got then?

A. Yes, sir.

Q. And you are using it for sand? Do you agree to that?

A. Yes, sir.

Q. And you're using it for your pneumatic air brakes?

A. Yes, sir.

Q. Eventually you are going to run out of air?

A. Yes, sir. I might state one more thing. That when you run out of air, that's when the auxiliary system sets the brakes.

Q. But you run out of air?

A. But this auxiliary tank is still filled with air until you come down to what you call running out of air out of the main tank to the compressor.

Q. Now, I have a question about the auxiliary system, since Mr. Feinberg referred to it. My question relates to the nature of this auxiliary system. What I want to know is, is this auxiliary system part and parcel of the pneumatic or air system, or is it more like a special addon?

Like when you order a locomotive from GE like this one, you state, "Hey and don't forget to include the auxiliary system. I really want that special feature." Like an AM-FM radio, you don't get it unless you ask for it. Or does it come with that as a standard part of the locomotive? Is it an option?

A. I don't have any idea whether it's optional or whether it's a standard part of the pneumatic system. Most of the trams of that size have the auxiliary system on it.

Q. Okay. Does it appear -- is that auxiliary system connected to the main tank, is that correct, by a valve?

A. Yes, sir. It's all piped into the same system.

Q. Did it have the appearance of being built in and being part of this system?

A. Yes, sir.

Q. You know of no federal statute or regulation that requires that auxiliary brake, do you Mr. Smith?

A. No, sir.

Mr. Funsch testified that the auxiliary truck emergency brake is not a part of the straight service air brake (pneumatic brake), and he described the truck emergency brake as follows (Tr. 242-243):

Q. You were here yesterday when you heard some discussion about an auxiliary braking system which the government has indicated it considers part of what you just described as a service or air brake. Is -- as I think you mentioned it -- an emergency truck brake, a part of the service brake?

A. No. I'd say it's a completely independent system, put on the locomotive as an additional safety feature, to cover a weak link in the system; which is an air hose that goes between the main frame of the locomotive and the trucks which must swivel; so you have to have -- you can't have pipe -- you have to have a hose that is flexible enough to move. The hose is subject to abrasion; and hitting objects on the track, could break. It's not made of heavy gauge pipe, as the rest of the system is. So, this is the weak link. If that hose was severed, this truck emergency system is designed to automatically supply air to the four brake cylinders.

Q. Somehow when there's a loss of pressure in the air hose to the jacks --

A. In the emergency pipe, we call it. Loss of air in that pipe automatically opens the valve, allowing stored air in each truck to go to the brake cylinders, and --

Q. What triggers that emergency truck brake? Is the severing of an air hose --

A. Or the equivalent. If you opened up any place in that line to vent it, as is done when the hose breaks, it automatically would apply 75 pounds cylinder pressure to each cylinder.

Q. It is not used in the normal functioning of the pneumatic or service brake system?

A. That is true. It's a back-up emergency system.

And, at pgs. 247-253:

Q. Let's go back to the auxiliary brake; what you termed as the emergency truck brake; what the government has called an auxiliary brake. You talked about a severing of the air hose, or what you called the pipe?

A. Energency pipe.

Q. Is that emergency truck brake designed to activate if all the air is bled off?

A. Are you speaking of the main reservoir here, or the two large reservoirs? If you lost the compressor, which is making the air; you used up all the air in your main reservoir system; it's independent of that -- it would not operate. It's not meant to; and it's not connected with it.

Q. What it's connected to is that little hose, so that if the hose severs, you will get brakes?

A. Exactly. That's the main feature.

* * * * * * * * * * *

Q. Was the auxiliary system -- what you called the auxiliary system --

A. I called it a truck emergency system.

Q. And that is not to be confused with the parking brake, or mechanical brake system?

A. Right.

Q. Was this auxiliary system designed as part of the integral part of this locomotive?

A. It was.

Q. It wasn't an option that was especially ordered by someone who said, "I want a No. 20 locomotive"?

A. It's a standard feature.

Q. And it isn't just the severing of the hose, as I understand it, that would trigger this auxiliary system -- this truck emergency system. Is that correct? There are other circumstances under which this auxiliary system will operate?

A. Only one that I know of.

Q. Tell us.

A. That is, if you put the brake valve in the emergency position.

Q. What brake valve are we talking about?

A. The operator's brake valve -- in the cab of the locomotive.

Q. And the valve that operates the pneumatic brake?

A. Yes. There's an emergency segment to it.

Q. If you're running your sanders, and all of the air is exhausted, are you telling us that the auxiliary system will not kick on to provide additional braking power, if you have on the pneumatic brake?

A. That is true.

Q. Only if you put it in the emergency position, will that activate the system?

A. By putting it in the emergency position, you vent the emergency pipe. All it does is open up a hole, and allows the pipe to vent. It's similar to breaking the hose, and allowing it to vent, which triggers the system.

Q. To provide that last safety margin?

A. Yes. I'm talking about an M 36 brake valve.

* * * * * * * * * * *

Q. But in any event, do you know, on the locomotive, is there a description on there that says, "Emergency condition," or is it just the furthest lever over? I don't know what this exactly looks like. Tell us.

A. I have a print here I'd like to show you, or maybe I can explain it. You move a brake valve handle through a roughly 180-degree segment. The first hundred degrees of

that segment is the normal service brake range. The further you move the brake valve handle, the more pressure you get in the brake cylinders. It's like opening a water faucet further and further -- you get more flow.

Q. Or similar to how hard you push down on the brake pedal on a car?

A. Yes. If you go beyond the service brake range, you get into the emergency range; and that's where it opens up the hold and applies 75 pounds through the truck emergency system. And I have a print of that valve, if anyone is interested in looking at it.

Q. I'm not, right at this moment. Perhaps Mr. Feinberg would be. When you're looking at this 180-degree lever, is there something to indicate when you reach that emergency level? Is there a marking on there?

A. There is a notch. You feel it, by feel. There is a detent in this segment which lets you feel that you're going past normal service brake range.

Q. And again, activating the sanding devices would not affect this auxiliary system. You've still got that in reserve, no matter how long the sanders are on?

A. Yes. That's right.

Q. Would you consider --

A. Let me qualify that. There is -- to supply air to this emergency system, we charge it through a small orifice. If you didn't have any air -- I'm talking about, like it would take a day to bleed that system back through that small hole, or many hours. So, I qualify it -- not normally by bleeding down the main reservoir supply, with the use of sanders -- it would not trigger the system. But if you left it there for a day, it conceivably could.

* * * * * * * * * * *

THE WITNESS: The shoes are common to both the truck emergency system and the normal service brake.

Steve Halsey, respondent's maintenance supervisor, testified that while the auxiliary of emergency truck braking system uses the same brake shoes and jacks as the air brake, it is a separate and different braking system which he characterized as an "emergency or third brake". He considered the dual braking system to be the pneumatic and dynamic brake and indicated that they are designed to stop the locomotive under

normal conditions (Tr. 335-336). He confirmed that the auxiliary braking system may be activated by (1) a break in the main line going to the grake cylinder valve, (2) the bleeding of the air over a long period of time through an orifice used for that purpose, and (3) placing the brake lever "all the way over" (Tr. 367).

The manual mechanical brake

Inspector Smith confirmed the fact that the manual mechanical brake was Inspector Smith's testimony confirms the fact that the manual mechanical brake was not part of the dual dynamic and pneumatic braking systems, and his testimony in this regard is as follows (Tr. 88-89).

> Q. Did this locomotive No. 20, have any other type of braking system on it other than the ones we've covered, being the dynamic and the pneumatic?
>
> A. Yes, sir; it had a manual brake.
>
> Q. Is that sometimes referred to as the mechanical brake?
>
> A. Mechanical brake, yes, sir.
>
> Q. Was that mechanical brake operative on this particular locomotive?
>
> A. No, sir.
>
> Q. How could you determine that?
>
> A. It was disconnected.
>
> Q. Where was it disconnected?
>
> A. From where the chain, which is connected to the linkage, to the brake rigging.
>
> Q. And did you determine this was disconnected when you made your underground investigation?
>
> A. Yes, sir.
>
> A. I might state that the manual brake is more or less used just as a parking brake.
>
> Q. Is there any other type of braking system on this No. 20 locomotive, other than the dynamic and the pneumatic?
>
> A. No.

And at pgs. 98-99:

> JUDGE KOUTRAS: So, the manual brake then was an additional thing that's really not required. I mean, if you'd walked in that mine and found a hand brake with the linkage misaligned could you have issued a separate citation on that, in and of itself? And if so, which standard would you say?
>
> THE WITNESS: Your Honor, at that particular time that was the policy that we were following. That's the guidelines we have, that the manual brake is mandatory, too. But that's strictly policy. We have no --
>
> JUDGE KOUTRAS: Whose policy is that?
>
> THE WITNESS: MSHA's.
>
> JUDGE KOUTRAS: What, the district management level?
>
> THE WITNESS: No, in our guidelines, in our manual that we use.
>
> JUDGE KOUTRAS: In the inspector's manual?
>
> THE WITNESS: Yes, sir.
>
> JUDGE KOUTRAS: So in other words, even though this locomotive has a dual braking system, which seemingly satisfies the requirements of 75.1404, if an operator happens to put a hand brake on, or some other device that is inoperative, then the policy at that time was citing them if they found something wrong with that?
>
> THE WITNESS: Yes, it was.

After testifying about MSHA's enforcement policy concerning an inoperative manual mechanical brake, Inspector Smith's later testimony seems to indicate that this is not an issue in this case, and his testimony is as follows, at pg. 133:

> Q. We're talking about section 75.1404, the section that you used for your order. So it's your contention that the dual braking system called for by that section is the dynamic or electrical brake and the pneumatic or air brake?
>
> A. Yes, sir.
>
> Q. The mechanical brake has nothing to do with the dual -- the mechanical park brake has nothing to do with that dual braking system, does it?
>
> A. .1404? No, sir, it doesn't.

Q. You have no quarrel with that dynamic brake, is that correct?

A. No, sir.

Q. This case is all about the pneumatic air brakes?

A. Yes, sir.

In response to my order of January 9, 1981, petitioner has filed a motion for further discovery in this case, and asserts that an additional supplemental hearing is required to resolve the questions presented by the Commission's remand. Specifically, petitioner now seeks to obtain copies of "necessary technical papers" relating to the braking system on the locomotive in question by subpoena served on the General Electric Company. Petitioner further seeks permission to depose respondent's expert witness William Funsch, a pneumatic engineering and brake systems specialist, and if necessary, subpoena him for further testimony.

Respondent opposes any further discovery or hearing, and asserts that it is no longer in the coal mining business and has not owned the subject mine since January 1980, and no longer employs the individuals who testified in its behalf at the hearing. Further, as pointed out by respondent in its opposition to petitioner's motion for further discovery, more than two years have passed since the hearing was held in this matter, and more than 21 months since I issued my decision in this matter. I believe there is sufficient testimony and evidence in the present record to enable me to make the specific findings ordered by the Commission in its remand, and under these circumstances petitioner's motion for further discovery in this matter is DENIED. In addition, the request by the parties for further briefing is likewise DENIED.

In view of the foregoing rulings, and in further consideration of the present record adduced in this proceeding, including the foregoing discussion, my further findings and conclusions on remand follow below.

Findings and Conclusions

As the Commission stated at page 3 of its decision, "to resolve any doubts, we hold that 30 CFR 75.1404-1 requires that a dual braking system be both present and operable". To resolve any further doubts, I agree with the Commission, and adopt this as my finding on this issue.

What constituted the pneumatic portion of the dual braking system.

The pneumatic portion of the locomotive dual braking system is that system which activates the brakes by means of an air compressor which supplies and disperses compressed air to the locomotive brake shoes, which in turn causes them to move and engage against the locomotive

trucks (wheels), thereby retarding the rotation of the wheels. The system is graphically described by the aforementioned testimony of the witnesses at pgs. 12 through 13, and need not be repeated here.

Why the primary pneumatic brake failed to stop the train after the electricity was interrupted.

It seems to me that the question as to why the primary pneumatic brake failed to stop the locomotive after the electricity was interrupted was something that MSHA should have initially explored in more detail at the time of the investigation of the derailment. After all, the statutory scheme regarding such investigations is intended to provide answers to previsely the type of questions that we are not exploring well after the fact. As I observed several times during the course of the hearing, MSHA failed to obtain any documentation concerning the engineering specifications of the locomotive braking systems, engaged in no pretrial discovery to ascertain all of the pertinent facts, presented no expert testimony, and simply relied on a rather superficial inquiry conducted by MSHA inspectors who had no real background or training on braking mechanisms. The inspectors did the best they could under the circumstances.

Mr. Kaylor stated that when he looked down inside the motor of the locomotive at the scene of the derailment the full braking surface of the brake shoe was not completely on one of the locomotive wheels, and he attributed this to the fact that the shoes had "leaked off" or "backed off" because the air pressure was gone (Tr. 58). He reiterated that when he observed the control levers for the pneumatic air brakes and the sanding device they were both engaged to the "on" position, thus indicating that the locomotive operator was using them, and he stated that both devices function by means of compressed air (Tr. 68).

Mr. Kaylor candidly conceded that had the harp assembly supplying power to the locomotive not fallen off, it was very possible that there would have been no accident, and sufficient air would have been maintained for both the dynamic and pneumatic braking systems (Tr. 180-181).

Mr. Kaylor conceded that the loss of the trolley harp assembly resulted in the loss of electrical power to the locomotive and he indicated that with the exception "of the mechanical", the trolley harp supplied "the entire needs for the locomotive, everything on that locomotive" (Tr. 13). He went on the explain that the only source of power to the locomotive is the electric trolley harp assembly which is connected to the overhead trolley wire, and that the loss of the harp assembly results in a loss of electrical power, which in turn results in a loss of the braking system because the air compressor cannot function without power and it becomes inoperative. The only air which is left in the system is that which is stored in the air tanks. The loss of electrical power automatically shuts down the air compressor, and any remaining air which may be stored in the

air tanks will supply air to the braking system until such time as it is exhausted by applying the brakes, leaks, or use of the sanding device.

Mr. Kaylor testified further that when he inspected the locomotive at the scene of the derailment, the brake lever was engaged, the locomotive power controls were "wide-open", and the sanding device was open. In these circumstances, since all of these devices function by air pressure supplied by the air compressor, if that compressor is not functioning, any remaining air pressure in the system will be lost over a period of time, and the air brakes and pneumatic brakes would be rendered inoperative due to the loss of air pressure (Tr. 38-43).

MSHA electrical inspector Gerald F. Smith assisted in the investigation of the derailment and he observed the brake shoes visually at the scene of the derailment. He candidly admitted that when he visually observed the condition of the brake shoes at the scene of the derailment, he made up his mind that a violation of section 75.1404 had occurred, and that this was before the locomotive was removed to the surface. He conceded that at the time he issued his order he cited a violation of section 75.1404 because he was acting under the assumption that the brakes were the cause of the accident and that he was under instructions to cite section 75.1404 in these circumstances (Tr. 147-148).

Locomotive operator Thomas M. Williams testified that at all times during the operation of the locomotive, up until he lost the electric trolley pole, he experienced no difficulties in the operation of the locomotive and detected nothing wrong with the braking systems which he had used, including the dynamic and pneumatic brakes. He also indicated that he had checked out the sanding device, the brake shoes, air pressure, and several other devices and found them all in satisfactory working condition (Tr. 275-276, 279, 282-284).

Mr. Williams testified that while traveling and approaching the "18 Hill" area underground, he momentarily lost his trolley pole, but quickly replaced it by hand. At this time he experienced no difficulties in negotiating the hill and was using both the dynamic and pneumatic brakes and the sanding device. He indicated that he used about "two-thirds" of the dynamic air brake control lever, periodically used his air brake "on and off", and had no difficulty controlling the trip of cars (TR. 287-288). However, he encountered serious problems when he discovered that he had completely lost the trolley harp assembly which supplies electric power to the locomotive while travelling in the two north parallel section (Tr. 288). After making this discovery, he "went to using every device on the motor that I knew to keep it under control" (Tr. 290), and he described his efforts at stopping the locomotive as follows (TR. 291-292):

> Q. And you say you did everything you could to bring the trip under control, or to maintain control?
>
> A. To keep it under control.

Q. What all did you do? What did that involve?

A. Well, that would involve using your -- well, I guess I opened the sand wide open, and I was using the dynamic brake and the air brake.

Q. Were you able to control the trip?

A. No.

Q. Did you ever have occasion to --

A. I mean, at this point, now the trip was all right, but as your air decreases, you're letting up.

Q. Because your harp was off the trolley wire, because you had no harp, your compressor was knocked out. Is this right?

A. Didn't have any compressor; didn't have anything.

Q. You wern't building up any additional air pressure?

A. No.

Q. And what pressure you had when the harp came off was all the pressure you had for the rest of the trip?

A. That's all.

Q. And you used your air, your sand and your electric brake to control the trip until it depleted your air supply?

A. That's right.

Q. Did you have occasion to look at the guage at any point -- your air guage?

A. Yes.

Q. What did it read when you looked at it?

A. It was on zero.

Q. The only time you oooked at it was when it said zero?

A. Yes.

Q. That was some time, I take it, after you had done everything that you could to get the trip stopped?

A. Yes.

~385
And, at pgs. 296-298:

Q. When you went down the hill until the harp had come off, and you were in the process of doing whatever you could to gain control of the motor -- you said you were working with your air brake, you were working with your electric brake and your sand.

A. Yes.

Q. Would you have had occasion during your manipulations to have taken the controller off of the electric brake and swing it over into the accelerating mode?

A. That would have been under maybe the motor went into a slide. As I previously stated, we never did use over about two thirds of the dynamic brake; all the way would lock it up. It may be, when all of this happened so fast until I did open it up, trying to control it, and it locked, and I had to come back off of dynamic into -- it's very possible.

Q. You would have swung it over into the accelerating mode to stop it from skidding?

A. To stop it from -- yes, sliding.

Q. And then go back to your brake?

A. Yes.

Q. When you realized that you had no air, did you continue to try to operate the controls in hope that something might happen to slow you down?

A. Well, I did everything humanly possible. I just can't give you item for item what I did there because things was getting out of hand then.

Q. Is it possible, from your experience running the locomotive under varying conditions, that, realizing your electric brake was not operating, you would have swung the controller back and forth, trying to get it to kick in?

A. That's true.

Q. And would that involve swinging it all the way over to ten points and all the way back onto full brake?

A. Yes.

Q. It's possible you could have swung it to ten before you jumped and left it on ten?

A. Left it on ten, that's right.

Q. But you were getting no response from that anyway?

A. No response.

Q. Prior to the time you lost your harp on No. 18 hill, in your opinion, were you under control? Was your trip under control?

A. At all times.

Q. There's no question in your mind about that?

A. No.

Q. And you were having no difficulty handling it?

A. No.

On the basis of the foregoing testimony of record, I conclude and find that the reason the primary pneumatic braking system failed to stop the locomotive after the electricity was interrupted was that the loss of electric power rendered the air compressor which supplied compressed air to the brake shoes inoperative, and that any available air which may have remained in the compressor after the loss of electrical power was depleted by the manipulation of the brakes and the sanding device by the locomotive operator in his attempts to bring the locomotive under control.

Whether the truck emergency brake was part of or independent of the pneumatic braking system.

MSHA's supervisory accident investigator James E. Kaylor, testified that he had no formal training in the operation of braking systems, was unfamiliar with some of the brake system technical terms, and that his knowledge of brakes and brakes shoes came about through experience (Tr. 47-48). Significantly, while Mr. Kaylor spent the entire morning of the first day of the hearing testifying in behalf of MSHA, and was subjected to vigorous cross-examination, and redirect, not once did he mention any auxiliary or emergency braking system. His focus was on the condition of the brake shoes which he visually observed at the scene of the derailment.

MSHA's September 8, 1977, official accident investigation report (exhibit P-7) compiled by Inspector Kaylor contains not one word about any auxiliary braking system, and it seems to me that if MSHA considered it significant it should have been explored in more detail as part of its investigation. The "findings of fact" made by Mr. Kaylor at pg. 5 of his report were limited to (1) an assertion that the pneumatic braking system was not adequately maintained because the brake shoes were not properly aligned with the wheels, thereby diminishing the braking ability, and (2) an assertion that the manual brake linkage was

disconnected.

Mr. Kaylor concluded that these alleged conditions constituted a violation of section 75.1404. A second "finding" made by Inspector Kaylor in his report relates to an asserted violation of section 75.512, for allegedly failing to maintain the mechanical braking machinery operative.

Mr. Smith's first reference to any auxiliary braking system appears at pg. 88 of the transcript where he described it as a "separate air tank" which disperses air to set the brakes "when the pressure in the system drops down to a certain level". He considered it to be a "safety system which provides additional air when the main system has bled out to a certain pressure level" (Tr. 88). A second reference to the auxiliary system is made at pg. 106 of the transcript where Mr. Smith stated the auxiliary system "was not operative". Later, at pg. 134, he states that "these locomotives were designed with the auxiliary system on it" as "a safety feature of the pneumatic system". And, finally, he was of the opinion that the air supply for the auxiliary system was connected to the main locomotive air compressor tank by a valve, and that "It's all piped into the same system" (Tr. 144). When asked by petitioner's counsel whether the auxiliary system was a standard or optional part of the locomotive, he responded, "I don't have any idea whether it's optional or whether it's a standard part of the pneumatic system. Most of the trams of that size have the auxiliary system on it" (Tr. 144).

Notwithstanding Mr. Smith's somewhat contradictory and equivocal testimony concerning the auxiliary braking system, it seems obvious and clear to me that the thrust of his testimony, like Mr. Kaylor's, was his contention that the asserted violation focused on the alleged misaligned brakes shoes.

Although Mr. Funsch agreed that the locomotive brake shoes are common to both the pneumatic and auxiliary or truck emergency system, and that it was designed as an integral standard part of the locomotive, both he and maintenance supervisor Hasley regarded it as a completely separate braking system which was designed to activate in an emergency situation. Mr. Funsch characterized it as a "completely independent system" and Mr. Hasley stated it was a "separate and different braking system" and an "emergency or third brake". Mr. Funsch also testified that in the event of a total loss of air due to the loss of the locomotive compressor the auxiliary system would not operate and this is because it is not designed to rely on the main air reservoir and is independent and not connected with it.

I believe that the preponderance of the credible evidence and testimony adduced in this case, particularly the testimony by respondent's witnesses, supports a finding and conclusion that the auxiliary or emergency truck braking system, while a part of the locomotive, operated and functioned separately and independently of the pneumatic air braking system.

(1) Assuming the truck emergency brake were found to be part of the pneumatic system, was it operable and could it have supplied air to the brake cylinders?

(2) Assuming the truck emergency brake is part of the pneumatic portion of the dual braking system, why did it fail to stop the train?

Even if one were to conclude that the auxiliary or truck emergency braking system was part of the pneumatic system, the burden of proof is on the petitioner to establish that it was not operable and could not have supplied air to the brakes. As for the question as why the auxiliary system failed to stop the train, that is a question that should have been considered during MSHA's investigation. This civil penalty proceeding should not be used as a forum for reinvestigation of the cause of an accident which occurred over three years ago.

At page six of its petition for review filed with the Commission, petitioner asserts that Mr. Funsch would not consider the locomotive's braking system to be in perfect working order if the truck emergency system was malfunctioning, and that he stated that there was a malfunction (citing Tr. 246, 253). These conclusions and supporting transcript references are taken completely out of context, and this is a typical example of an advocate arguing for a position on appeal that he could not support before the trier of fact. A closer examination of the transcript reflects that Mr. Funsch was responding to questions from respondent's coulsel concerning the design characteristics of the locomotive and he specifically stated that assuming sufficient air were present in the system, he had no doubts the design capacity of the locomotive would have permitted it to stop within the distance in question. Mr. Funsch's comment that "there was a malfunction -- something happened" related to the locomotive design and Inspector Kaylor's previous testimony that there was a malfunction. It is absolutely clear from the record that Mr. Funsch had no idea what that malfunction may have been. Since the burden of proof is on the petitioner, it is incumbent on the petitioner, not the respondent, to establish what that malfunction was.

With regard to Mr. Funsch's observation that he would not consider the braking system to be in perfect working order, his testimony was qualified and was in response to the hypothetical condition of the brake shoes, and it appears as follows at pgs. 253-255:

> Q. Would you consider the locomotive in question -- which you admittedly have never seen or examined at any time -- would you consider the locomotive's brake system to be in perfect working order, if I told you hypothetically that the auxiliary system was malfunctioning?

A. I would say certainly not in perfect order.

Q. Would you consider the system to be in proper working order, the way it was designed to be functioning, if I told you that the brake shoes were misaligned?

MR. FEINBERG: Objection. What system are we talking about? He's testified that the auxiliary, or what he calls emergency truck brake system, is not part of the dual braking system, that this case is all about.

JUDGE KOUTRAS: I assume Mr. Moran has reference to one of the two dual braking systems?

MR. MORAN. That's right. We're talking about the pneumatic system, which operates the brake shoes.

MR. FEINBERG: This gentleman has just testified that the auxiliary brake is not part --

MR. MORAN: We've covered that; and now I'm going on to another aspect of the braking system.

MR. FEINBERG: I just don't want a confusion in the record when the word system comes in, without describing what system we're talking about.

JUDGE KOUTRAS: Why don't you describe the particular system in your hypothetical, Mr. Moran?

BY MR. MORAN:

Q. Mr. Funsch, were you confused by my question:

A. No.

JUDGE KOUTRAS: All right. Don't describe it, then, if he can understand the question.

THE WITNESS: The shoes are common to both the truck emergency system and the normal service brake.

MR. MORAN: That's right. And that's the only way I understood the system to be also.

BY MR. MORAN:

Q. Now, if I told you that the brake shoes were improperly aligned, improperly adjusted, would you say that this was in satisfactor working order? Would you consider that to be the way it was designed? Does it matter --

A. (Indicating).

Q. You shook your head, and that won't appear on the record. Does it matter?

A. It does matter. However, usually the shoes -- if you have a loose brake shoe hanger, it wobbles. But it usually seeks the flange on the wheel, and the flange will center it on the wheel. So. you usually don't get gross misalignment.

Q. So, the purpose of the flange is to keep the shoe in line?

A. One of the purposes, yes. Ans also to create more brake shoe area on the wheel.

Q. But as I understand it, it's not the flange itself that does the job of braking the locomotive. That is not its primary purpose?

A. True.

Q. And if I told you that perhaps the flange was doing the primary job of braking that particular locomotive, that would give you some cause for concern, would it not?

MR. FEINBERG: Objection. I assume this is a hypothetical?

JUDGE KOUTRAS: Yes.

BY MR. MORAN:

Q. That is a hypothetical. And when you nod, it doesn't appear on the record. Would you express it verbally?

A. I would say, if you're only braking on the flange of the wheel, it's a dangerous sitaution.

Inspector Smith testified that the auxiliary system "sets the brakes" when the air supplied by the compressor is exhausted due a loss in electric power or use of the pneumatic brake and sanding devices, and he believed that even though the available air in the main compressor has been depleted, the auxiliary air tank still contains enough air to activate the brakes "until you come down to what you call running out of air out of the main tank to the compressor". He also testified that the auxiliary air system is connected to the main air tank by a valve and stated that "It's all piped into the same system". I find Mr. Smith's testimony to be somewhat contradictory, and it seems to suggest that the air supply for the auxiliary system, as well as the air supply for what has been characterized as the pneumatic system (air brakes), all comes from common air compressors

which rely on electrical power to function. If this were the case, then it would logically follow that any loss of power would necessarily interrupt the normal available air pressure required to activate the brakes, and once that supply is exhausted by the locomotive operator's attempts to stop the locomotive, there is none left. As a matter of fact, Inspector Kaylor's accident investigation report concluded at pg. 5 that "the major contributing factor to the accident was the disengagement of the locomotive trolley pole from the wire and the subsequent loss of the trolley harp assembly which led to a premature loss of the pneumatic and dynamic braking systems (The dynamic braking contactors were pneumatically operated)".

Mr. Funsch testified further that the auxiliary braking system was designed to activate when (1) the flexible hose or "pipe" supplying air to the brake cylinders are severed, or (2) the locomotive operator activates the emergency control lever, thereby venting the pipe and triggering the system. He made it clear that by simply engaging the pneumatic brake, any subsequent loss or exhaustion of air will not activate the auxiliary system or provide additional braking power. Petitioner has presented no credible evidence to establish that the auxiliary braking system was in fact inoperable. While there was some testimony concerning the position of the brake system levers at the scene of the derailment, including the testimony of the locomotive operator, and some mention of this in MSHA's accident report, MSHA simply has provided no evidence to support a conclusion that the locomotive operator engaged the emergency brake lever to its full "on" position, and that due to some inoperable condition, that system failed to function properly. In short, as stated in my original decision, MSHA simply failed to make a case, and hindsight, further discovery, or additional hearings will not cure this defect in its position in this matter.

ORDER

In view of the foregoing findings and conclusions made by me on remand, my prior decision and order vacating the citation and dismissing this proceeding is reaffirmed, and this case is DISMISSED.

George A. Koutras
Administrative Law Judge