De Reamer: No, I don't. You see, the point I was trying to make—I told you that probably we would all have a corporate safety report that would indicate the relative safety performance of each plant. At the moment we are not using one because I don't think that this corporate report would tell us what the relative standing of our plants was, or how well or how poorly they were doing. Let me just show you what I mean. The characteristic way of reporting accident statistics is to collect all the facts—a, b, c, d, e and so forth—and then after the plant you indicate the frequency rate—and you list them in order with the plant with the worst frequency rate at the bottom and the plant with the best frequency rate at the top. Right? Isn't that the way? Well, how do you do it?

De Reamer: Well, this is the way we used to do it, too, and when you look at the report from year to year, you realize that a manager wasn't told anything; all he was being told was that his plant had a frequency rate of 2.03 and plant B had a frequency rate of 3, and plant C had a frequency rate of 4, and so on. Nothing was said as to whether they were doing any better safety job. All they were told was that for every million manhours worked they had X number accidents that they counted.

What I'm doing—and all of our plant safety people are doing it, because I think we're together on this—we're first trying to educate management as to what the specific statistics mean, and we are experimenting with other kinds of statistics, like total injury experience and doctor's cases. I'm not necessarily saying that these statistics are meaningful, either, but we're looking at them to see whether or not there is a possibility of finding some kind of criteria that would at least tell in numbers what kind of a job is being done.

I've said to our management that accident statistics as far as I'm personally concerned are like litmus paper. Litmus paper tells you whether you are acid or base. Accident statistics if they are properly used can tell you whether or not your plant is getting better, is getting worse or is remaining the same.

Some of you are disagreeing a little bit and your disagreement is good. Instead of selecting plants in order of their frequency rates, we're listing plants in order of the improvement. Now here is what we've experimented with. We've taken the total injury experience, doctor's cases, and disabling injuries in 1958 and comparing with 1959, indicated the per cent of improvement. You find that the plant that has done the best job, you can list up at the top; the plant that has done the worst job, you can list at the bottom. You can definitely say that Plant A is doing a good job because they have improved in all areas.

I think we first must educate our management to want these statistics. This is the way it works with everything else—cost, production—the general manager of the plant isn't getting the cost report because some cost manager told him that he should have it; he's getting it because he asked some cost manager to prepare reports for him, because he wanted them. And I think that accident statistics have to come through the same kind of metamorphosis—or generation.

Question from the floor: In other words, while you don't require field data, you obviously are getting it.

De Reamer: Well, yes, I'm getting it because I'm experimenting. But I'm not using it yet.

Question from the floor: You use field data in your work—it isn't completely disregarded as a central staff function.

De Reamer: Let me just give you a little bit more insight on what I'm trying to get at—the point I'm trying to make is that I did, two months ago, request from all of our plants accident statistics. And I prepared reports something like the report I prepared here—and I sent it out to the general managers and I said, "Does this look like anything you'd like to have?" And one manager said, Yes, it was something he'd like to have. And another manager said he thought so, too. Now, if all the managers will come through and say yes, we'd like to have this—we'd like to have it on a quarterly basis, on a semi-annual—we'll prepare it for him. And it then becomes their responsibility to determine how far down the line they want to send those statistics. This is a very small fraction of a corporate safety man's job—this occurs once a month, and with modern IBM equipment it takes just a moment to get it out.

Harvey: The real trouble with our A.S.A. codes on accident frequency and severity is

that they were made by a group of safety engineers without any mathematicians or statisticians to help them. Statistics can be very misleading. For example, you have two departments. This department is running at 90 per cent efficiency; this department at 60 per cent. Which department supervisor is doing the best job? Why, the one at 90 per cent, sure—but let's go back behind that. The one at 90 per cent was runing 100 per cent up to 6 months ago; while the one at 60 per cent was only running 30 per cent. We took that supervisor out of that 100 per cent one and put him down in the 30 per cent one. He's brought that up to 60 per cent, while the other one has gone down to 90 per cent. You see, these things can't be arbitrarily listed.

Now, in our statistical set-up in Ford Motor Company, we take frequency and severity and give them equal weights by a mathematical formula—frequency divided by the frequency of the company and severity divided by the severity of the company, the two quotients added to make an index. Then we position all of our plants and we judge our plant performance by whether they are moving upward or downward in their listing. Now it's true that a plant can move upward or downward with situations beyond the control of the safety program.

I reviewed the safety program of a plant recently which has shown a marked improvement. I say a plant—it's an activity—and the main reason for their better record is that they built a new plant and moved into it. The new plant is much easier to operate safely. These things are extremely complicated—you have to figure them out. As far as management not knowing about injury rates, I can tell you that Ford Motor Company up until 1946, when the new management came in, was operating on the basis that the plant managers just want to know who gets hurt—you can send a report out but they don't care about any ratios.

When the new management team took over control, one of the first things asked was, "What is your Safety Program? Where are your frequency and severity reports?" Today management receives these reports regularly.

Stuffing: That's the whole point, incidentally.

Bozen: Two and a half years ago we established a statistical recording requirement from our plants through their divisions to the New York corporate office. This has worked fairly well—we've had to modify it some. I agree wholeheartedly with this business of the lost time accident frequency and severity not being worth much. However it is traditional—we are still continuing to use them, for I suppose it is nice to know how you are stacking up with somebody else in your particular industry. But this is about as it is, as far as I am concerned. Perhaps I can describe our particular report—I have it here and anybody that would like to take a look at it afterwards is most welcome to do so.

We list our plant, by divisions. We show the injuries by type—whether or not permanent total or partial or temporary total—lost time accident frequency and severity. We also show the manhours and total accident costs. Cost is reported regardless of whether the location is self-insured, commercially or state fund insured. Then we develop a cost per $100 of payroll. Next to this we show a manual classification, picked arbitrarily as the major classification for that particular plant location; we don't bother with their clerical office workers or any of the rest, just the major classification—if it is a sheetmetal classification mainly, and ¾ of their manufacturing payroll is in this, then this is it. We compare their actual rate with the manual rate, for a guide to how well they are doing. Now, this is really a progress report. We are interested mainly in what they are doing from year to year or from quarter to quarter, as the case may be. This report is quarterly now, but will become semi-annual. We show the per cent of increase or decrease over the previous year's record. This gives us a cumulative, running figure year after year as to actual progress. This year starting January 1 we are adding to this, total accident frequency. Our greatest weight is to be placed on that total accident frequency and improvement. Now, as to the use that these statistics are put to—they are sent to our personnel or safety administrators—I keep saying personnel for the simple fact is that almost all of our safety administrators are also our personnel administrators too. It is their job to educate their local management on the importance of these statistics—what is an accident frequency, what does it mean and how is he using it to help the plant manager improve his safety record.