

Spinal Column Wednesday September 8, 2004

The Ralph Kummler Interview

September 08, 2004 - Commerce Township resident Ralph Kummler's work with environmental issues has helped to enhance air, land and water quality throughout the state, country and world. His research interests include storm overflow along the Rouge and Detroit Rivers, industrial waste control, landfill emissions studies and auto-exhaust testing. Kummler is responsible for establishing the Hazardous Waste Program at Wayne State University's (WSU) College of Engineering, where he was recently named dean. He is a member of the Michigan Environmental Science Board, the International Joint Commission's Detroit-Windsor/Port Huron-Sarnia Air Pollution Environmental Committee, and is on the board of directors for the Engineering Society of Detroit, from which he's received the Horace Rackham Humanitarian Award, the Air and Waste Management National Award in Waste Management and the Distinguished Service Award. Kummler has also served as an environmental advisor to several foreign countries. He recently spoke with the Spinal Column Newsweekly about his new position at WSU and some of the environmental issues facing Oakland County and the state.



SCN: When were you appointed as dean? What are the biggest challenges the college is facing? How will those challenges be met? What changes in programs, partnerships or other areas, if any, would you like to implement?

Kummler: My effective date (in the dean position) was Aug. 9.

The biggest challenges are maintaining our preeminence in high technology. We have a tremendous program in smart sensors, looking at and trying to develop techniques in protecting everyone in Homeland Security and protecting the Army from various biological attacks. We have a tremendous infrastructure program, where our civil engineers are looking at ways of making traffic control flow smoothly. We have a tremendous nano-technology, looking at devices we can't see that will improve our lives in the future in many different aspects. And, as you might well expect, Wayne State University's College of Engineering has an important role to play in continuing the preeminence Detroit as the motor capital of the world.

The big one that we've been working on is the alternate energy program that we are doing in conjunction with NextEnergy. The last two governors have wisely noted that there are 200,000 jobs in the state of Michigan that are very tightly tied to the internal combustion engine. Everyone agrees that, someday, we will no longer have the internal combustion engine. Nobody agrees on exactly what will replace it, and when, but it's our job in the College of Engineering to try to be prepared for that to make sure that the graduates of our programs are ready to implement whatever the next phase might be. And, it's the job of our faculty to help lead, to try to find exactly what's the best way for the country and the state to go.

SCN: Some of your recent research includes investigating alternative energy sources. Coal burning power plants have been named as one of the major contributors to mercury emissions in the country. What are some viable sources of alternative energy that can be used in the future? What are the advantages over traditional energy sources?

Kummler: One of the major resources in the United States, like it or not, is our coal deposits. We have some of the most extensive coal deposits of any country in the world. And, we have continued to learn to burn those coal resources more and more efficiently. We've switched from coal, wherever possible, to oil or natural gas, with natural gas being the cleanest source of fuel. But, the natural gas resources that we have are not nearly as abundant as other fossil fuels. One of the alternatives is nuclear power. Europe and other countries around the world have elected to use nuclear power, but we decided after a few difficulties that nuclear power would not be a favored source. Many people worldwide believe that we are going to have to reverse that decision if we want to avoid energy problems in the distant future. I believe that some of our premier companies in this field have been producing nuclear plants for countries in the rest of the world, and could probably come back and do them much more safely and efficiently than we have in the past. So far, we haven't needed to do that.

SCN: Recent studies have showed that fine particle matter, or dirt and soot, in air emissions in metro Detroit are not meeting the standards of the Federal Clean Air Act. Some environmentalists claim that changes in diesel emissions should help raise the quality of air. Is reducing diesel emissions enough? What other measures, if any, should be taken? Also, there have been rumors of implementing auto emissions testing again. Do you feel that is necessary? Why or why not?

Kummler: Both the state and the local governments, through SEMCOG (the Southeast Michigan Council of Governments), are worrying about the next generation of state implementation plans. Many years ago when I started in the air pollution business, we were just concerned about the total tonnage of emitted particles, then we recognized that it was really the fine particles that caused health problems, and we've gradually refined that standard. As we've refined it, we've managed to

continue to work with industry to make sure those standards are met. I think we will be able to continue to do that. We've certainly made the air tremendously cleaner than it was 30 years ago, and every year there are major improvements that industry implements.

I think about 20 years ago, I served on a group that the Legislature put together to review the AET (auto emissions testing) program that was in place at the time. They found that it was no longer necessary. I've been serving on SEMGOG's committee reviewing the next generation of (regulations) and I understand that is at least in the proposal stage and is a possibility. The automobile companies have argued in the past that their automobile designs will eliminate the problem, and a possible alternative procedure to doing actual car-by-car testing is to look at parameter inspections. The automobile engines have gotten sufficiently complicated that they don't operate unless everything is put in the way it is designed, so generally a car that has not been tampered with will meet all the regulations. You don't necessarily need to go through the more complicated and expensive testing. That may save the taxpayers a great deal of money if the experts decide that is the way to go.

SCN: You have served as an international advisor to other countries such as Czechoslovakia, Egypt and Mexico. What are some of the similar environmental challenges each of the countries and the U.S. are facing? What are some of the differences? How does U.S. environmental policy stack up to other countries' on a whole?

Kummler: The international studies have been really interesting and exciting. I was invited to go to what was then Czechoslovakia right after the revolution where the students and environmental people stood up to the Russian Army and the army decided that it wasn't worth it and backed down. That was a really unique experience because both the Czechs and the Slovaks had separate environmental agencies and it was clear they knew they were going to divide up into two different countries. It was a unique experience because they wanted to show the world their environmental problems because they did not cause them. The governments in power could say it was the other people running the country that had caused them. So, we looked at their forests where the acid rain had eaten away the trees at the top of the mountains. We looked at their rivers that were polluted, we looked at the brown coal that they were using that produced a tremendous amount of sulfur — all problems that had been solved in the United States. So the U.S. EPA (Environmental Protection Agency), and other groups like the one at Wayne State, were able to give them positive advice on what to do, and they've been improving.

Mexico was very interesting because their environmental laws are all modeled after those in the United States. For example, they had an emissions testing program for the entire country that is almost identical to the one that the state of Michigan had. Despite the fact that their country had many more vehicles and people than Michigan, they had the same number of inspectors. Therefore, it was clear that their program wouldn't work very well and we were able to give them advice from the Michigan experience. In Egypt, we run a meeting there every two years, so this coming March we will be running the ninth meeting on energy and the environment in Cairo.

I think despite the bad press that occasionally comes out, the combined government regulatory agencies, the population and industry are all committed to improvement. Obviously, there are bad apples in every group, but I think that I've certainly seen an enormous amount of progress and I intend to see a lot more in the next decade. We believe that in many cases that the Europeans have technology that is competitive and in some cases superior to ours. So, we are not necessarily the world leaders in environmental technology and regulations, but I think we are pretty close.