

Keynote Luncheon Address – October 13th, 2004

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Thank you [for the nice introduction.] I want to thank you all for giving me the opportunity to speak at this year's Mining Diesel Emissions Conference.

It is wonderful to be here in Canada. As many of you might expect, this is a particularly crazy time in Washington. Filled with intrigue, excitement, media frenzy, and many of us wondering just what to expect in the coming months...

But enough about the Expos' move!

Seriously, I am happy to be here in spectacular Canada, one of my favorite vacation destinations. A country truly blessed with natural resources.

In my line of work, it's especially heartening to participate in an international conference that attracts a diversity of stakeholders, including labor, government, academia, manufacturers, and mine operators, to name a few.

After all, air pollution is an international problem. And I'm a firm believer that the best solutions are likely to come when *all* of us have a seat at the table. There's ample of evidence of this. Today, I am going to discuss some of the US EPA's recent work on improving diesel engines and how it affects the mining industry.

In a letter to a friend describing her thrill at riding for the first time in a locomotive, the writer/philosopher Ayn Rand wrote, "There is nothing as glamorous as a brilliant achievement of the human mind, and a diesel engine is certainly that."

I imagine that the first miners to use a diesel engine felt much the same way, as the diesel engine replaced the hard labor of picks and carts with powerful front-end loaders and long-haul dump machines.

However, for almost 100 years, as the diesel engine grew in importance to nations' economies, pollution controls were not a priority. This lack of attention came despite the fact that diesel emissions, specifically particulate matter, was an important problem.

I found an excerpt from an 1898 patent from Rudolph Diesel on the Mine Safety and Health Administration's web site that best sums this up – "It is of particular importance that the fuel entering at the mouth should be thoroughly consumed and without the formation of soot."

And we know even more today about the serious detrimental health impacts of diesel exhaust. EPA has classified diesel exhaust as "likely to be carcinogenic to humans by inhalation at environmental exposures." Reducing diesel exhaust, including particulate matter, can lead to reductions in respiratory problems, asthma, cardiac events, and even premature mortality.

It is especially critical to take such steps for people in certain occupations, especially mining, as they could have more significant health impacts than the general population.

There is good news, however. The technologies being developed for today's and tomorrow's diesel engines can dramatically reduce these negative impacts. I'd like to thank and acknowledge mining stakeholders for being at the forefront of addressing pollution through PM filters and other technologies.

In less than a decade, diesel engines went from being part of a \$1 B enforcement case and an aggressive "Dump Dirty Diesels" campaign from one of the leading environmental groups to the more positive image of clean diesel engines that is more common today.

Support for this transformation can be found in two specific EPA actions. In 2000, we announced the first of two historic rulemakings that together are bringing about a new era of clean diesel. This past May we announced the other one. With cutting-edge control technologies and cleaner, low-sulfur fuel, both nonroad and highway vehicles will be 95 percent cleaner than their current counterparts. These rules include much of the equipment used above ground in mining, particularly the Clean Air Nonroad Diesel standards.

The Clean Air Nonroad diesel standards set out a very aggressive set of emissions controls. Essentially starting in 2008 for smaller engines, and 2011 for the rest, PM and NOx levels will be phased in to very low levels. These new standards will be coupled with ultra low sulfur diesel fuel. For engines greater than 750 hp, we decided to implement very stringent PM standards beginning in 2015, but for NOx we determined it would not be appropriate to require similarly stringent standards at this time. Instead, we set standards for 2011 requiring about a 60% reduction from today's levels, and specifically noted that we will revisit this issue in the 2007 timeframe. Mining industry concerns for this class of engines played an important part in our decision-making. Thus, it is important for us to know all of the relevant facts when we are engaged in rulemakings.

We have provided a number of program flexibilities to help engine and equipment manufacturers manage the transition to the new standards. We recognized there could be a fair amount of engineering that might need to occur for some pieces of equipment, and not so much for others. My advice to you today – start working on your new products.

The benefits of the Clean Air Nonroad standards are enormous. Due to this new program, annual emissions of oxides of nitrogen, particulate matter, and sulfur dioxide will be reduced by 1.1 million tons by the year 2030. Long-term annual health benefits include the prevention of 6,000 children's asthma-related emergency room visits, 8,900 hospitalizations, 12,000 premature deaths, 15,000 heart attacks, 280,000 cases of respiratory symptoms in children, and 1 million lost work days. The long-term annual monetized health and welfare benefits of this program will exceed \$80 billion when the program is fully implemented.

The Clean Highway Diesel rule had similarly impressive values. And costs for both programs are estimated to be a small fraction of the overall benefits.

The Clean Air Nonroad Diesel Program represents a unique and historic achievement of environmental progress through collaboration. EPA's public rulemaking record documents the numerous interactions with stakeholders over a 3 year time span, as well as the written input from more than 150,000 individuals and organizations. And I can assure you that we read and respond to every comment.

I know the Americans in the audience will especially agree: one of the most amazing things about this program is that... it was not challenged in court! No other major mobile source regulation of such magnitude and complexity has escaped litigation in Clean Air Act history.

Arguably, President Clinton's signature environmental success was the Highway Diesel Rule. Undeniably, President Bush's signature environmental success is the Clean Air Nonroad Diesel program. Quite a list.

Both rules were accomplished only after hundreds of meetings with stakeholders, thousands of hours of government staff and management time, and resolution of what seemed like millions of issues. EPA, the oil industry, engine manufacturers, the environmental and public health community, state and local governments, and other stakeholders all recognized the importance of environmental controls and participated in a collaborative process to effect win-win policy solutions.

These historic achievements succeeded in large part because of the irrefutable evidence about the benefits of a collaborative rule-making process - one we hope to emulate as we address other areas of use for diesel engines, such as for locomotive and marine vessels.

As you may know, my agency doesn't regulate below ground engines. However, our work with the above ground engines certainly has a significant effect on the mining industry.

We anticipate the nonroad rule will have a significant indirect effect on the mining industry. We expect this program to trigger innovation that will benefit the environment and the industry. While the changes undertaken by industry admittedly require investment, we also expect that they will reduce costs as new technologies are applied more broadly.

The technology development work being undertaken to meet EPA's new standards will undoubtedly benefit technologies used in underground mining operations. Ultra-low sulfur diesel fuel will be widespread. New emission technology will be introduced to engines a decade ago no one would have even thought to call "clean."

Likewise, while the nonroad regulation is only applicable in the U.S., the impact it has on the marketplace will be felt across borders. So will the health benefits. We worked closely with the European Commission throughout our rule development process as they were undertaking a similar effort. The end result is that U.S. and European nonroad diesel emission standards are essentially harmonized, and we expect them to be even more so before the end of this decade.

We understand that Canada is moving towards adopting similar standards, and we are hopeful that other countries around the world will do the same.

However, these rules don't take effect right away—and major reductions are further postponed by the time needed for fleet turnover. To make a difference in the immediate future, EPA is promoting diesel retrofits and the early introduction of clean, low sulfur fuels. I know the mining industry has been interested in retrofits for a long time.

Our office has set a goal to retrofit or replace all 11 million diesel engines in use today by 2014. We would be happy to work with mining interests to develop additional opportunities.

Clearly, a lot of has been accomplished, and we still have much more to accomplish together. Conferences like this are a step in the right direction. I find it pretty remarkable that this conference is the result of an effort that started well over two decades ago.

The spirit of collaboration that goes on here is an inspiration and model for others to follow.

A well-known public speaker (George Jessel) of a few decades past once said “The human brain starts working the moment you are born and never stops until you stand up to speak in public.” I hope that my words today were informative. It was my pleasure to be here, and I welcome your questions. Thank you.