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Resident Vice President
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March 9, 2006

The Honorable Susan Clarke Schaar Clerk of the Senate of Virginia Post Office Box 396 Richmond, VA 23218

#### Dear Susan:

Enclosed is Norfolk Southern Corporation's 2005 Annual Coal Dust Report. The report highlights Norfolk Southern's continuing efforts to identify and mitigate coal dust emissions from our rail corridors and facilities throughout the Commonwealth.

If you have any questions or comments about this report, please do not hesitate to contact Mr. Richard Russell, System Director for Environmental Protection, at (540) 981-4456.

Sincerely,

W. Bruce Wingo

#### **Enclosure**

cc: The Honorable Bruce F. Jamerson, Clerk of the House of Delegates 
Mr. R. P. Russell



# ANNUAL REPORT TO THE JOINT SUBCOMMITTEE STUDYING MEASURES TO REDUCE EMISSIONS FROM COAL-CARRYING RAILROAD CARS PER SENATE RESOLUTION NO. 257

# Submitted by

Norfolk Southern Corporation Environmental Protection Department Roanoke, Virginia

February 2006

# Summary of Key Accomplishments in 2005

- Norfolk Southern's Performance Monitoring Plan remains fully implemented.
- The trackside monitor in Altavista, Virginia continues to monitor trains headed for the Tidewater area providing timely and valuable feedback to the mines participating in Norfolk Southern's coal dust reduction program.
- The 1-800 dusting report line continues to be available to record any complaints from persons and businesses located in the rail corridors through which Norfolk Southern transports coal. In 2005, there was only one complaint logged from Virginia.
- Monitoring of Total Suspended Particulate (TSP) and very fine particulate (PM-10) near Lamberts Point in Norfolk, Virginia continues to demonstrate compliance with DEQ ambient air quality standards.
- Norfolk Southern provides timely feedback to the coal mines served including the relative success or failure of their preventive measures to reduce fugitive emissions.
- Norfolk Southern continues to work with those mines that continue to be identified as not meeting the Performance Monitoring Plan's dust control standards by conducting periodic audits of the mines to ensure optimal performance.
- Norfolk Southern is using the "Six-Sigma" Continuous Improvement Process for evaluating our current mitigation program. Process mapping of our mitigation techniques and gauge evaluation studies were continued in 2005 to ensure the best use of the available dust prevention resources.

In accordance with the 1996 Virginia Senate Joint Resolution No. 257, Norfolk Southern (NS) summarizes the efforts to identify and mitigate fugitive coal dust emissions from its rail corridors and facilities in the Commonwealth during the calendar year 2005. This report illustrates Norfolk Southern's compliance with the resolution and our commitment to protect the environment.

#### 2005 Review

# **Performance Monitoring Plan**

The Performance Monitoring Plan is NS's strategy for monitoring the effectiveness of coal treatments by participating mines and for identifying additional mines that may be encouraged to participate in the dust control program. The major components of the Performance Monitoring Plan currently implemented are:

- Trackside Monitor -- Altavista, Virginia
- 1-800 Dusting Report Line
- Community Air Quality Monitoring at Lamberts Point in Norfolk, Virginia

The multi-component approach established by NS is designed to provide continuous and unbiased feedback on the performance of its dust control program with the trackside monitors and 1-800 line.

As mentioned in previous reports, NS continued to work towards full automation of train tracking by providing improved access to NS's database including the Coal Transportation Management System.

Norfolk Southern will continue the Performance Monitoring Plan in 2006. Norfolk Southern will, as it has done in the past, work to expand mine participation should the trackside monitors or the 1-800 Dusting Report Line identify significant new sources. Norfolk Southern will also continue to participate in the evaluation of advanced dust control agents for use in the coal dust treatment program.

In August 2005, Norfolk Southern, in collaboration with a major coal shipper, conducted a set of experiments to improve the performance of a frequently identified dust source. These experiments also served as a review of the existing treatment techniques and will lead to improvements proposed for 2006.

### Trackside Monitor -- Isle of Wight County

The trackside monitor near Windsor, Virginia, in Isle of Wight County was decommissioned in 2005. The train information has been redundant with that obtained from the Altavista trackside monitor.

## Trackside Monitor -- Altavista, Virginia

The trackside monitor at Altavista monitors both trains bound for export through Lamberts Point as well as those destined for regional domestic coal consumers.

A continuing goal is to reduce the time taken to alert the mines of any evidence of treatment failure and thus to enable prompt corrective measures, if necessary.

NS develops a report for each dusting train that passes the trackside monitor. Each mine's shipment is graded (A - E) and a summary table identifies the originating mine believed responsible for the dust signal as well as those shipments that appear to have no coal dust emissions.

In 2005, the Altavista trackside monitor reported that 55% of the trains produced little measurable dust (<25 micrograms per cubic meter). The average of the dust signals produced by the remaining 45% of the trains remained below 100 micrograms per cubic meter. For comparison the average was 144 micrograms per cubic meter in 2001; 68 micrograms per cubic meter in 2002, 69 micrograms per cubic meter in 2003 and 72 micrograms per cubic meter in 2004. Maintaining a < 100 micrograms per cubic meter average intensity of dusting events is the most likely reason for the continued low number of 1-800 reports.

# 1-800 Dusting Report Line

One call to the 1-800 Dusting Report Line was received in 2005 compared with two in 2001, one in 2002, one in 2003 and zero in 2004. The data from the trackside monitor sites suggest a modest reduction in the number of dusting trains and a somewhat greater reduction in the magnitudes of the detected dust signals.

The combination of 1-800 reports, the details provided through the trackside monitor, and subsequent train tracking efforts provides a basis to encourage the mines to participate in the dust mitigation program and improve existing efforts.

## **Lamberts Point Community Air Quality Monitoring**

The Lamberts Point Community Monitoring Program monitors airborne particulate in the area surrounding the Lamberts Point coal pier in Norfolk. One Total Suspended Particulate (TSP) monitor and one monitor for very fine particulate (PM 10) are operated at the Virginia Initiative Project's waste water treatment facility adjacent to the pier. The DEQ ambient air quality standards were not exceeded at any time in 2005. NS continues to operate a weather station at Lamberts Point to assure the availability of information critical to the evaluation of TSP and PM-10 monitors.

#### **Anticipated 2006 Program Improvements**

NS continues to fund improvements in the tools needed to execute its Performance Monitoring Plan. In addition, NS will, through its "Six-Sigma" initiative, continue an industry-recognized quality improvement method for assessing the effectiveness of the NS Performance Monitoring Plan. Continued evaluation of the trackside monitoring is critical to maintaining confidence in the Performance Monitoring Plan by NS, its customers and the citizens of the commonwealth of Virginia.

Utilizing the results of its coal dust suppression treatment experiments conducted in August 2005, NS will continue to explore ways to improve the treatments and expand their applications to additional mines.