

**2003 ANNUAL REPORT TO THE
JOINT SUBCOMMITTEE STUDYING MEASURES TO REDUCE
EMISSIONS FROM COAL-CARRYING RAILROAD CARS
PER SENATE RESOLUTION NO. 257**

Submitted by

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Summary of Key Accomplishments in 2003

- Norfolk Southern's Performance Monitoring Plan remains fully implemented.
- The Trackside Monitors near Windsor, VA and Altavista, VA continue to monitor trains headed for the Tidewater area, which provides 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. The number of complaints from the monitored corridor has remained low compared to the early years of operation. In 2003, only one Virginia complaint was logged on the 1-800 line.
- Monitoring of Total Suspended Particulate (TSP) and very fine particulate (PM-10) near Lamberts Point in Norfolk, VA 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 2003 to ensure the best use of the available dust prevention resources.

2003 Review

In accordance with the 1997 Virginia Senate joint Resolution No.257, Norfolk Southern (NS) has summarized its efforts to identify and mitigate fugitive coal dust emissions from its rail corridors and facilities in the Commonwealth during calendar year 2003. This report illustrates Norfolk Southern's compliance with the resolution and our - commitment to protect the environment.

Performance Monitoring Plan

The Performance Monitoring Plan is NS' strategy for monitoring the effectiveness of coal treatments by participating mines and to identify 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 Isle of Wight County
- Trackside Monitor Altavista, VA
- 1-800 Dusting Report Line
- Community Air Quality Monitoring

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.

Norfolk Southern will continue the Performance Monitoring Plan in 2004. 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 potential use in the coal dust treatment program.

Trackside Monitor -- Isle of Wight County

The Trackside Monitor near Windsor, VA, in Isle of Wight County, is designed to detect coal dust emissions from trains destined for Norfolk and NS' Lamberts Point Terminal. The Isle of Wight location was chosen since it permits monitoring of treated coal shipments after their exposure to more

than 300 miles of transport. NS designed this monitor for two primary purposes:

- 1) To provide continuous monitoring of the effectiveness of dust mitigation treatments being performed by participating load-out facilities; and
- 2) To identify additional coals to be considered for inclusion in the coal car treatment program.

The Trackside Monitor collects data from both the northern and southern sides of the track. 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.

Trackside Monitor -- Altavista, VA

A second Trackside Monitor is deployed in Altavista, VA. The Trackside Monitor at Altavista monitors both trains bound for export through Lamberts Point, as well as those destined for regional domestic coal consumers. Thus, the data collected at this site has identified mines for participation in the NS dust mitigation program that would not have been seen by the Isle of Wight Trackside Monitor.

In 2003, the Isle of Wight and Altavista Trackside Monitors reported ~55% of the passing trains produced no measurable dust emissions, with ~76% of the passing trains producing low dust emissions. While the number of shipments exceeding the minimum threshold for a grade of A or B increased slightly over last year, the average magnitude of the exceedances continued to remain low: 69 micrograms per cubic meter in 2003 as compared to 68 micrograms per cubic meter in 2002 and 144 micrograms per cubic meter in 2001. Reduction of the intensity of dusting events is the most likely reason for the continued low number of 1-800 reports.

1-800 Dusting Report Line

There was one Virginia call to the 1-800 Dusting Report Line in 2003, compared to one in 2002, two in 2001 and 22 in 2000. The combination of 1-800 reports and the details provided through the Trackside Monitor and subsequent train tracking efforts provides the information needed to visit and encourage the responsible mines to participate in the NS dust mitigation program.

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. Prior to August 2003, it consisted of three Total Suspended Particulate (TSP) monitors and one monitor for very fine particulate (PM IO) in the neighborhood surrounding Lamberts Point. Given the consistent compliance with the air quality standards, NS suspended monitoring at Taylor Elementary School and Old Dominion University. A PM-10 monitor was moved to the Virginia Initiative Project's wastewater treatment facility adjacent to the pier where it now operates in tandem with a Total Suspended Particulate monitor. The DEQ ambient air quality standards were not exceeded at any time in 2003. NS continues to operate a weather station at Lamberts Point to assure the availability of information critical to the evaluation of the TSP and PM-10 monitors.

Anticipated 2004 Program Improvements

NS continues to fund improvements in the tools needed to execute its Performance Monitoring Plan. NS continues to work towards full automation of train tracking by providing improved access to NS' database including the Coal transportation Management System. In addition, NS intends to introduce an industry-wide recognized quality improvement method for assessing the effectiveness of the NS Performance Monitoring Plan through its "six sigma" initiative.