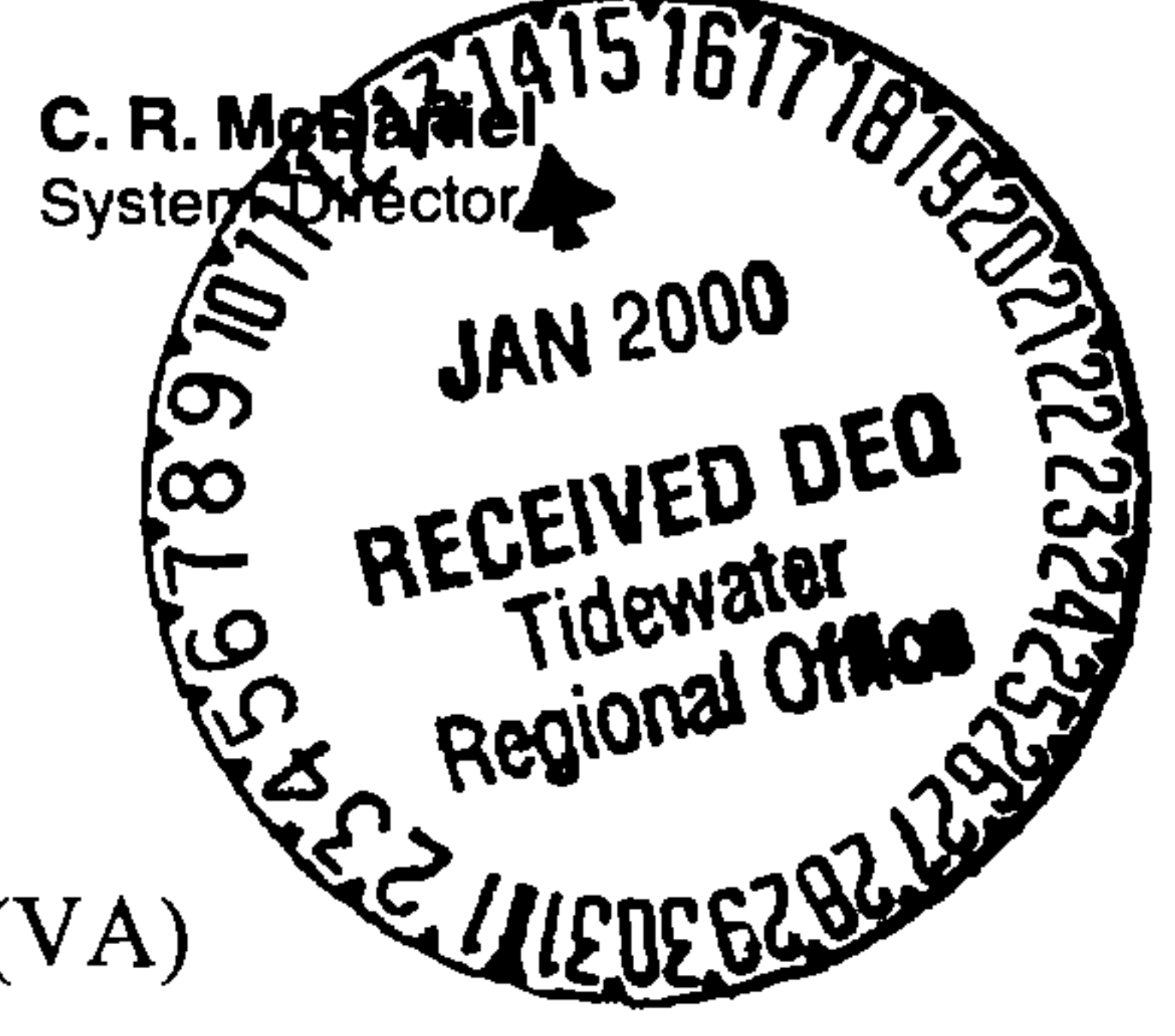


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Norfolk Southern Corporation  
Environmental Protection  
110 Franklin Road, S.E.  
Roanoke, Virginia 24042-0013  
540 981-4456



January 11, 2000  
1-9-2-10-5-Coal Committee (VA)

Ms. Jane Workman  
Virginia Department of Environmental Quality  
Tidewater Regional Office  
5636 Southern Blvd.  
Virginia Beach, VA 23462

Dear Ms. Workman,

Enclosed please find Norfolk Southern's 1999 "Annual Report to the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars." The report is submitted as required by Virginia Senate Joint Resolution No. 257.

The report outlines Norfolk Southern's coal dust control initiatives performed in 1999, and our proposed actions to continue the dust monitoring in 2000 as committed to the Senate Joint Committee.

If you have any comments or questions after reviewing the report, please contact my office at (540) 981-4456 or Mr. Bruce Wingo at (804) 649-2485.

Sincerely,

*C. Russell McDaniel*  
C. Russell McDaniel

Enclosure

Cc: W. Bruce Wingo – NS Office of Public Affairs, Richmond

**Annual Report to the  
Joint Subcommittee Studying Measures to Reduce  
Emissions from Coal-Carrying Railroad Cars  
per Senate Joint Resolution No. 257**

Submitted by  
Norfolk Southern Corporation  
Environmental Protection Department  
Roanoke, Virginia

January 2000

## Summary of Key Accomplishments

- *Norfolk Southern's Performance Monitoring Plan remains fully implemented.*
- *The Track Side Monitor near Windsor, VA 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.*
- *A second Track Side Monitor is currently deployed in Altavista, VA. This new mobile monitor enables Norfolk Southern to acquire information on dusting trains in close proximity to an area associated with repeated reports of dusting made through the 1-800 system.*
- *1-800 Dusting Report Line continues to record complaints from persons and businesses located in the rail corridors through which Norfolk Southern transports coal.*
- *Monitoring of Total Suspended Particulate (TSP) and Particulate Matter Less Than 10 Micrometers (PM<sub>10</sub>) near Lamberts Point in Norfolk, VA continues to demonstrate compliance with the Department of Environmental Quality's ambient air quality standards.*
- *The dustfall study conducted at Lamberts Point in Norfolk has been concluded. The data collected has enabled Norfolk Southern to prioritize facility upgrades that may enhance fugitive dust control.*
- *Norfolk Southern has established enhanced contact and communication with the coal mines served by Norfolk Southern regarding participation in the reduction of fugitive emissions.*
- *Norfolk Southern continues to work with mines that are identified as not meeting the Performance Monitoring Plan's dust control standards. Norfolk Southern conducted periodic audits of the mines to ensure optimal performance and anticipates more frequent audits in 2000.*

In accordance with the 1996 Senate Joint Resolution No. 257, Norfolk Southern (NS) summarizes the efforts of the company and its consultants, Simpson Weather Associates and Marshall Miller, Inc., to identify and mitigate fugitive coal dust emissions from its rail corridors and facilities in the Commonwealth during the calendar year 1999. This report illustrates Norfolk Southern's specific compliance with the resolution and our commitment to the environment.

## **1999 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:

- Track Side Monitor – Isle of Wight County
- Mobile Track Side Monitor – Altavista, VA
- 1-800 Dusting Report Line
- Rail Transport Emissions Profiling System
- Seasonally Adjusted Rail Transport Dustiness Index

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 track side monitors, and 1-800 line. The rail transport emissions profiling system and seasonally adjusted rail transport dustiness index serve, when called upon, to generate additional, quantitative data needed by Norfolk Southern and its customers to decide on the proper course of action to reduce emissions that have been detected.

Norfolk Southern will continue the performance monitoring plan in 2000. Norfolk Southern will, as it has done in the past, work to expand mine participation should rail transport emissions profiling system, the track side monitors, the seasonally adjusted rail transport dustiness index, or the 1-800 dusting report line identify major 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.

### **Track Side Monitor – Isle of Wight County**

The track side monitor near Windsor, VA in the county of Isle of Wight is designed to detect coal dust emissions from trains destined for Lamberts Point in Norfolk. 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 track side monitor is collecting data from both the northern and southern sides of the track. A tower on the north side holds a laser sensor that is aligned with a detector mounted on the south-side tower. The laser data provides redundancy in the dust detection system that is valuable in discriminating between dusting and non-dusting coal shipments.

For each dusting train that passes the track side monitor, a report is developed by NS. A summary table identifies those shipments that are the most likely responsible for the dust signal as well as those shipments that appear to have no coal dust emissions.

#### **Track Side Monitor – Altavista, VA.**

A mobile version of the track side monitor remains deployed in Altavista, VA. In response to persistent complaints from that area, NS has decided to keep the monitor there until its removal and re-siting is warranted. The Track Side Monitor at Altavista monitors both trains bound for export through Lamberts Point as well as those destined for regional domestic uses. Thus the data collected at this site have identified mines for participation in NS's dust mitigation program that would not have been seen by the Isle of Wight installation.

#### **1-800 Dusting Report Line**

The total number of calls to the 1-800 dusting report line for 1999 are approximately the same as that for 1998. The public's awareness of the 1-800 number appears to have increased. The track side 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. A common comment by those calling is that while the number of significant dusting trains seems to have decreased, there are still some cases that are "worth calling about."

The combination of 1-800 reports and the details provided through the track side monitor and subsequent train-tracking efforts provides the information needed for NS to visit and encourage the responsible mines to participate in the 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. It consists of three total suspended particulate monitors and one monitor for particulate matter less than 10 micrometers (PM<sub>10</sub>) in the neighborhood surrounding Lamberts Point. Total suspended particulate monitors are located at the Virginia Initiative Project's waste water treatment facility adjacent to the pier, Taylor Elementary School in the West Ghent neighborhood, and the Health Sciences building on Old Dominion University's campus. The monitor for particulate matter less than 10 micrometers (PM<sub>10</sub>) is located at the ODU site. No exceedances of the DEQ ambient air quality standards have been recorded in 1999.

Dustfall data collected in 1998 and 1999 at sites within and surrounding the Lamberts Point facility provided additional air quality information in and around the Lamberts Point yard. The primary benefit of this data has been to establish a consistent baseline of relative dust levels around the facility that can be used to evaluate and prioritize additional fugitive dust mitigation efforts.

## **Norfolk Southern Rail Emissions Study**

NS continues to have access to the rail transport emissions profiling system developed during the rail corridor study. The rail transport emissions profiling system is attached to the rear sill of a loaded coal car and records numerous parameters including wind speed, rainfall, coal temperature, and dust emissions during transit. The rail transport emissions profiling system is primarily used to:

- 1) Gather data during coal transport to demonstrate to individual mines that it is in their economic interests to reduce material loss from their coal shipments; and
- 2) Periodically test the effectiveness or diagnose detected failures of dust mitigation techniques being used on coal in transit.

While the rail transport emissions profiling system was not used during 1999, 20 of the passive collectors (that are components of the rail transport emissions profiling system) were transported to Bluefield Virginia where they can now be more readily deployed on rail cars and recovered for analysis in Roanoke or Norfolk.

## **Anticipated 2000 Program Improvements**

While progress was made in 1999 in automating the tracking of non-dusting as well as dusting loads to specific mines, there are still some improvements in the software that will be pursued. NS recognizes the need to provide participating mines with quantitative evidence of dust control successes and not just reports of failures.

\*\*\*OCR\*\*\*

The following pages contain the Optical Character Recognition text of the preceding scanned images.

NORFOLK  
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Norfolk Southern Corporation S@Rl. M  
Environmental Protection te cto

110 Franklin Road, S.E.  
Roanoke, Virginia 24042-0013  
540 981-4456

January 11, 2000  
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Operating Subsidiaryi Norfolk Southern Railway Company



Annual Report to the  
Joint Subcommittee Studying Measures to Reduce  
Emissions from Coal-Carrying Railroad Cars  
per Senate Joint Resolution No. 257

Submitted by  
Norfolk Southern Corporation  
Environmental Protection Department  
Roanoke, Virginia

January 2000

## Summary of Key Accomplishments

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0 1-800 Dusting Report Line continues to record complaints from persons and businesses located in the rail corridors through which Norfolk Southern transports coal

0 Monitoring of Total Suspended Particulate (TSP) and Particulate Matter Less Than 10 Micrometers (PM<sub>10</sub>) near Lamberts Point in Norfolk, VA continues to demonstrate compliance with the Department of Environmental Quality's ambient air quality standards.

0 The dustfall study conducted at Lamberts Point in Norfolk has been concluded. The data collected has enabled Norfolk Southern to prioritize facility upgrades that may enhance fugitive dust control

0 Norfolk Southern has established enhanced contact and communication with the coal mines served by Norfolk Southern regarding participation in the reduction of fugitive emissions.

0 Norfolk Southern continues to work with mines that are identified as not meeting the Performance Monitoring Plan's dust control standards. Norfolk Southern conducted periodic audits of the mines to ensure optimal performance and anticipates more frequent audits in 2000.

In accordance with the 1996 Senate Joint Resolution No. 257, Norfolk Southern (NS) summarizes the efforts of the company and its consultants, Simpson Weather Associates and Marshall Miller, Inc., to identify and mitigate fugitive coal dust emissions from its rail corridors and facilities in the Commonwealth during the calendar year 1999. This report illustrates Norfolk Southern's specific compliance with the resolution and our commitment to the environment.

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- and
- 2) Periodically test the effectiveness or diagnose detected failures of dust mitigation techniques being used on coal in transit.

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