

**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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In accordance with the 1997 Virginia Senate Joint Resolution No. 257, Norfolk Southern Corporation (Norfolk Southern) summarizes the efforts to identify and mitigate fugitive coal dust emissions from its rail corridors and facilities in the Commonwealth during the calendar year 2019. This report illustrates Norfolk Southern's compliance with the resolution and its commitment to protect the environment.

Summary of Key Accomplishments in 2019

- Norfolk Southern's Performance Monitoring Plan remains fully implemented.
- The Trackside Monitor in Altavista, VA continues to monitor trains headed for the Tidewater area. Norfolk Southern continues to improve characterization of in-transit emissions using statistical tools to identify sources of excessively dusty events. Norfolk Southern also continues to utilize analytical tools to increase its ability to respond more timely if any significant dust events occur.
- The Dusting Report Line (1-800-621-0772) continues to be available to record any complaints from persons and businesses located in the rail corridors through which Norfolk Southern transports coal. No calls from Virginia were received on the line in 2019.
- Monitoring of particulate matter (PM₁₀) near Lamberts Point in Norfolk, VA continues to demonstrate that PM₁₀ levels are far below the National Ambient Air Quality Standard (NAAQS) set by the U.S. Environmental Protection Agency (EPA).

2019 Review

Performance Monitoring Plan

The major components of the Performance Monitoring Plan currently implemented in Virginia are:

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

The multi-component approach established by Norfolk Southern is designed to provide continuous and unbiased feedback on the performance of its dust control program with the Trackside Monitor and 1-800 Dusting Report Line. Norfolk Southern will continue its efforts to identify any significant sources of in-transit dust emissions via continuous monitoring. Norfolk Southern will also continue to monitor the ambient air quality at Lamberts Point in Norfolk, VA.

Trackside Dust Monitor – Altavista, VA

The Trackside Monitor at Altavista, VA monitors both trains bound for export through Lambert's Point as well as those destined for regional domestic coal consumers. The Trackside Monitor operates 24/7 and uses an autonomous system to evaluate the amount of dust generated by individual trains. Norfolk Southern has worked to identify the most significant contributors of in-transit dust emission via a statistical approach using analytical tools over a large dataset collected by the Trackside Monitoring system. Tracing the sources of individual dusting events and analyzing how frequently each source is associated with such events, Norfolk Southern is able to identify the most significant contributors. Targeted for deployment in 2020, Norfolk Southern is working to develop an alert system which would provide more timely notification of any dusting events.

1-800 Dusting Report Line

Norfolk Southern continues to operate a call line (1-800-621-0772) to receive reports on dusting events and coal dust related complaints. There were no calls to the 1-800 Dusting Report Line originating from Virginia in 2019.

Lambert's Point Community Air Quality Monitoring

The Lambert's Point Community Monitoring Program monitors airborne particulates in the area surrounding the Lambert's Point coal pier in Norfolk, VA using a PM₁₀ sampler. In 2016, Norfolk Southern completed a 12-month study to Virginia DEQ's satisfaction and has continued its monitoring using a PM₁₀ sampler located at the Hampton Roads Sanitation District's (HRSD) wastewater treatment facility adjacent to the pier. Currently, sampling is

regularly conducted every six days, according to the U.S. EPA-prescribed particulate sampling schedule. In 2019, the average PM₁₀ concentration at the site was 13.10 µg/m³, and the maximum concentration was 28.35 µg/m³. The 24-hour National Ambient Air Quality Standard (150 µg/m³) has never been exceeded.