

**REPORT OF THE
JOINT SUBCOMMITTEE STUDYING**

**WAYS TO REDUCE EMISSIONS
FROM COAL-CARRYING
RAILROAD CARS**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



SENATE DOCUMENT NO. 23

**COMMONWEALTH OF VIRGINIA
RICHMOND
1997**

MEMBERS OF THE JOINT SUBCOMMITTEE

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Del. V. Earl Dickinson, Vice Chairman
Sen. Richard J. Holland
Sen. Yvonne B. Miller
Sen. Malfourd W. Trumbo
Del. Flora D. Crittenden
Del. George W. Grayson
Del. Raymond R. Guest, Jr.
Del. George H. Heilig, Jr.

STAFF

Division of Legislative Services
Alan B. Wambold, Research Associate
Kenneth W. Gibson, Staff Attorney

Office of the Clerk of the Senate
John McE. Garrett, Deputy Clerk of the Senate

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- B--Senate Joint Resolution No. 1 (1992)
- C--Senate Joint Resolution No. 201 (1993)
- D--Senate Joint Resolution No. 27 (1994)
- E--Senate Joint Resolution No. 267 (1995)
- F--Senate Joint Resolution No. 34 (1996)
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EXECUTIVE SUMMARY

Responding to the concerns of citizens in various parts of the Commonwealth about the detrimental effects of coal dust emissions on their quality of life, the General Assembly initiated an informal study of the subject following introduction of legislation at its 1991 Session. A formal study of ways to reduce emissions from coal-carrying railroad cars was established in 1992 (Senate Joint Resolution No. 1) and continued in 1993 (Senate Joint Resolution No. 201), 1994 (Senate Joint Resolution No. 27), 1995 (Senate Joint Resolution No. 267), and 1996 (Senate Joint Resolution No. 34).

In recent years, some citizens and businesses residing along various railroad lines have reported periodic problems arising from coal dust emissions. Occurring primarily during the hot, dry months of summer, incidents of coal dust blowing from trains have generated complaints of the dust settling on homes, automobiles, decks, and outdoor furniture, necessitating their repeated cleaning. Citizens depict the coal dust as a costly nuisance that requires doors and windows to remain closed and children to be kept indoors.

Many complaints of coal dust emissions came from areas of the Commonwealth situated along tracks used for coal transport by Norfolk Southern Railway Company (NS), a large Virginia-based railroad. Responding to the concerns of legislators and their constituents, as well as its interest in reducing material loss during transit, NS retained a consultant to conduct a comprehensive study of the issue. The Joint Subcommittee, at each of its meetings, received updates on the study's progress, and a report was presented to the panel in January of 1994.

Throughout its study, the Joint Subcommittee has endeavored to seek solutions to abate the fugitive coal dust problem without *over*-solving it, thereby balancing the interests of affected citizens and businesses, rail companies and coal producers, and protecting the Commonwealth's economic vitality. This attempt at balance led to several continuations of the study until, at its 1996 Session, the General Assembly provided for the final extension of the mandate of the Joint Subcommittee for the sole purpose of permitting a year-long evaluation of the effectiveness of dust-suppressing technology put in place through cooperative efforts by coal producers and the railroad industry. This evaluation is now complete and the profiling and crusting program appears to be sufficiently successful in reducing the amount of coal dust blown from moving trains that the present study can be ended. However, the Joint Subcommittee recommends to the General Assembly a draft joint resolution requesting annual informational updates on coal dust suppression activities to enable prompt legislative action, should that prove necessary.

**REPORT OF THE JOINT SUBCOMMITTEE STUDYING WAYS TO
REDUCE EMISSIONS FROM COAL-CARRYING RAILROAD CARS**

to

**The Governor and
The General Assembly of Virginia
Richmond, Virginia
January, 1997**

I. STUDY ORIGIN AND BACKGROUND

The Joint Subcommittee to Study Ways to Reduce Emissions from Coal-carrying Railroad Cars was established formally by the General Assembly in 1992 (Senate Joint Resolution No. 1, see Appendix B), following consideration during the 1991 Session of legislation that would have required covers on coal-carrying railroad cars (Senate Bill No. 566 and a duplicate bill, House Bill No. 1163, see Appendix A). The initial panel was comprised of nine General Assembly members: five members from the House of Delegates, appointed by the Speaker of the House; and four members from the Senate, appointed by the Senate Committee on Privileges and Elections.

In 1991, during committee deliberations on the two cover-requiring bills, industry representatives maintained that the cost of such a legislative mandate would be financially crippling. NS representatives testified that coal car covers would cost \$700 apiece and the cost of loading and unloading each car would increase by \$200. Opponents of the legislation successfully persuaded the General Assembly to study issues presented by the bills in lieu of passing the legislation. The measures were subsequently authorized for subcommittee study by the chairmen of the committees to which they were referred: Senate Commerce and Labor and House Roads and Internal Navigation.

During the 1991 interim, the subcommittees met jointly and heard testimony regarding the nature of the fugitive coal dust problem for some citizens living along the tracks. The subcommittees recommended that they continue their study as a joint subcommittee, and SJR No. 1 was subsequently adopted by the 1992 General Assembly.

At the Joint Subcommittee's November 1992 meeting, representatives of NS informed the panel that a major component of the study being conducted by its consultant--operation of a "test water spray facility"--had been delayed. The facility, which was designed to test the effects of spraying selected cars with water, met construction delays because the permitting process took longer than expected. Anticipating the study's findings, the Joint Subcommittee recommended that its work be continued.

A July 1993 public hearing was the forum for the Joint Subcommittee to view--via videotape--operation of the NS test water spray facility. While experimentation with water spraying will continue, it appears to be of limited effectiveness. In the report delivered to Subcommittee members in January of 1994, the NS consultant recommended a one-year test

period to evaluate different alternatives, including the use of chemical binders on the coal loads. With NS officials seeking a "self-imposed control strategy" and the Joint Subcommittee intent on resolving the issue, the panel recommended continuing its study.

II. WORK OF THE JOINT SUBCOMMITTEE

The Joint Subcommittee's two focal points throughout its work have been the concerns expressed by citizens and businesses adversely affected by dust emissions and the response and efforts of NS to address the problem. As a result, each meeting's intent was to achieve a more thorough understanding of the nature and extent of the emission problem and to learn what, if any, progress was being made in abating it. From its inception, the panel has convened five meetings, summarized as follows:

- *July 9, 1991, Roanoke.* Citizen input was received at a well-attended public hearing.
- *September 4, 1991, Richmond.* Testimony was solicited from industry representatives, including NS, CSX Corporation, and the Virginia Coal Association.
- *November 23, 1992, Richmond.* The Joint Subcommittee was apprised of the status of the NS study, and received comments from affected citizens and businesses.
- *July 9, 1993, Salem.* The public hearing was highlighted by a viewing of a videotape prepared by NS, showing the operation of its recently implemented test water spray facility. Another videotape, presented by an Altavista employer, illustrated the continued concerns of residents and businesses.
- *October 7, 1993, Norfolk.* This public hearing featured over 20 speakers from the Hampton Roads area, many of whom related their experiences with coal dust originating from an NS terminal at Lambert's Point.
- *September 9, 1995, Roanoke.* Members were briefed by railroad and coal industry representatives participating in a program designed to reduce the amount of coal escaping from railroad cars through shaping or "profiling" of coal cargoes and use of a chemical bonding agent to reduce dust emissions from coal deemed to be particularly dusty. Three speakers and written testimony submitted to the panel, however, pointed to a continuing concern about coal dust pollution, although recent improvements were noted.
- *December 14, 1995, Richmond.* Members of the joint subcommittee received an update on a railroad and coal industries' initiative designed to reduce the amount of coal escaping from railroad cars and on their plans to monitor the performance of the program. The panel was also briefed on data collection and compliance efforts regarding the NS coal terminal at Lambert's Point. It was decided to seek extension of the Subcommittee's mandate by the General Assembly in order to be able to monitor the program's performance over a full year, particularly the hot, dry months of summer.

- *December 4, 1996, Richmond.* NS reports a decline in complaints of dusting coal, from 52 in 1995 to only 15 in 1996. The panel feels that, though considerable success has been achieved in controlling coal dust blown from moving trains, it would be useful for the General Assembly to receive annual updates from NS and any other affected railroads on any developments relating to coal dust from railroad cars -- particular in the number, frequency, and source of complaints by the public. A consensus further feels that any problems associated with coal dust blown from coal loading facilities at Lambert's Point are sufficiently different from those associated with coal dust blown from cars of moving trains to be considered as a candidate for a separate legislative study of its own.

Coal Transport in the Commonwealth

The mining of coal and its transport continue to fuel Virginia's economic engine. Mine workers, coal suppliers, coal transporters and end users all rely on the production of coal and its journey from the mines of Southwest Virginia to the ports of Hampton Roads. The route of NS trains carrying coal through the Commonwealth is illustrated below.

The NS fleet of coal cars numbers about 45,000, with each car in a typical 180-car train carrying approximately 100 tons of coal. The types of coal vary in size and composition, depending on customer specifications. Steel makers, utilities and other customers have increasingly demanded that coal producers provide finer and drier types of coal, responding in part to air pollution laws requiring that users burn cleaner and higher-energy coal. The coal is not owned by the railroad, but by the coal companies.

Coal Dust Complaints

Testimony before the Subcommittee consistently indicated that the fugitive coal dust problem had begun, or intensified, over the past several years. Many witnesses contrasted the finer types of coal currently being transported with the lumpier coal that used to be shipped and speculated that finer coal has been the reason for the increase in reported emissions.

In presentations to the panel, videotapes, pictures, materials, coal dust samples and other visual aids illustrated some of the problems encountered by persons subjected to coal dust emissions. Homes and cars need repeated washing, windows and doors must stay closed, and outdoor activity is curtailed because of the coal dust. Patio furniture and gardens are said to glisten with coal dust.

A so-called "blowout," typically occurring during extreme meteorological conditions, can result in 40-foot-high clouds of dust billowing upward. Particularly bad episodes have reportedly forced some vehicles traveling along Route 29 to turn on headlights or pull off the road. Homeowners have made claims with NS in exceptional cases to pay for the cleaning of their homes. In several instances, the company has reimbursed them in amounts ranging from \$750 to \$3,000.

For those so affected, the constant presence of coal dust was characterized as a burden that diminishes their quality of life. The dust leaves a greasy black film wherever it lands, settling on windowsills and finding its way through cracks and crevices. Although documentation has not been available, some citizens exposed to emissions expressed concerns about the potentially harmful health effects of coal dust exposure.

Both an Altavista employer and an Altavista town officials testified as to their specific concerns. Upon investing \$1.3 million to upgrade its facility roofing system, the employer has had to periodically have it cleaned at a cost of \$3,000 per cleaning because it is being discolored by coal dust. Company representatives told the panel it was working with the roof's manufacturer to determine if premature material failure might result from exposure to coal dust (a memorandum prepared for the Subcommittee is attached as Appendix C). In addition, a constant complaint among the company's employees is that coal dust accumulates on their vehicles in parking lots.

Terming the effects of coal dust emissions "detrimental and destructive" to its citizens and businesses, Altavista's town manager informed the panel of the Central Virginia Planning District Commission's resolution in support of "the need for a positive approach to resolving this problem on behalf of the citizens of the Commonwealth."

In Norfolk, the Subcommittee heard from area residents who have been subjected to emissions from the NS terminal at Lambert's Point. Although the panel's focus from the outset has been on resolving problems associated with fugitive coal dust from moving trains, Tidewater citizens expressed problems and concerns akin to those previously articulated by persons residing along the tracks on the train route from Southwest Virginia to the port.

Industry Initiatives

Intent on formulating its own coal dust control strategies as opposed to having a mandate imposed by the legislature, NS has invested in excess of one million dollars toward seeking a solution to the fugitive dust problem. Retained in 1991, consultant Simpson Weather Associates was directed by NS to quantify coal losses during transit; determine the key physical factors responsible for fugitive emissions from coal shipments; derive key emission factors; and select, assess and evaluate dust control options. The consultant addressed these issues in a series of field and laboratory experiments entitled "Norfolk Southern Rail Emission Study."

Test Water Spray Facility. One facet of the study was operation of a facility designed to test the effects of spraying certain coal cars with water. Constructed over six months in Giles County at a cost of \$380,000, the test water spray facility became operational in May 1993. The computer-controlled system sprays loaded coal cars with water when a dispatcher in Roanoke notifies the engineer that conditions are appropriate to do so. The engineer guides the train through the facility at five miles per hour while computers and sensors activate the system. Each car is sprayed with 30 gallons of water from two stations that have the capacity to spray 300 gallons per minute. Excess water is collected in fiberglass retention ponds located under the

track, thereby minimizing overspray and water waste. After spraying, the computer collects information and generates reports that are sent by modem to NS's main offices.

To obtain reliable results, an instrument package was developed for mounting on the top of a loaded coal car. The system provided details on the environmental stresses and dust emissions in close proximity to the coal surface and throughout the trip from the mines to the port. In addition, a robotic vision system was developed to assess the wind erosion losses from all cars that passed under its arrangement of video cameras. In conjunction with the field study, laboratory experiments were also conducted to study how atmospheric conditions and the type of coal transported affect emissions.

Study Findings. According to the NS research, significant progress has been made in understanding and quantifying fugitive coal dust emissions. The types of coal used for the study were selected because they are considered by NS and its customers to be among the dustiest coals being transported. The consultant determined that under similar environmental and transportation stresses (e.g., coal surface temperatures, coal moisture, coal particle size, surface wind speed, etc.), different coals produce varying intensities and frequencies of emissions. Estimates are that an average of 0.31 tons of tested coals (approximately 600 pounds) is lost from each car during the rail trip between the mine and the port. Coal loss ranged from 0.0 to 0.8 tons per car. It was emphasized that coals considered to be dusty represent only 10 percent of NS-originated coal and that these losses are the worst-case scenario for an inherently dusty coal being transported under dry and stressful conditions.

The most intense dusting occurs when trains traveling in opposite directions meet at normal track speeds. In addition, tunnels, trestles, and open fields often cause emissions due to lateral wind stresses. In evaluating a variety of mitigation techniques, the consultant found that spraying water on the surface can be effective for a limited period. As treated cars move farther from the spraying facility, water evaporation and other factors decrease effectiveness. The most successful mitigation technique appears to entail modifying the load profile of coal cars followed by application of a chemical binder. The consultant recommended a one-year test period during which evaluation of prescriptions for dust control products, load profiles and surface binder applications could be optimized and performance monitoring procedures could be refined.

Pilot Project. Reminding Subcommittee members that railroads do not own the coal they ship and coal companies are wary of adding chemicals that might affect the coal's combustibility, NS representatives informed the panel at its October 1993 meeting that the company was negotiating an agreement with a coal producer to conduct an experiment with a chemical sealant. Subsequently, Subcommittee Chairman Elliot S. Schewel announced that NS and Consolidation Coal Company had agreed to participate in a one-year pilot project, beginning in the Spring of 1994, having two principal elements: changing loaded coal car profiles so that the load is less likely to give off dust and applying surface treatments and/or bonding agents to loaded coal that should inhibit dusting.

Citizen Hotline. Responding to a suggestion from the Subcommittee, NS agreed to incorporate a citizen reporting component into the study. In April 1993, its consultant installed

the Dust Information Telephone Line to receive coal dust complaints (1-800-621-0772). Thirty-seven calls were reported by the end of the 1993, most of them coming from the western part of Virginia around Shawsville, Altavista and Whitehorne. As increasing numbers of people became aware of the complaint hotline, the number of complaints grew, but fell again following full implementation of the "profiling" and crusting program in 1996.

III. CONCLUSION

Data reported by NS, bolstered by a significant drop in the number of hotline complaints and the lack of adverse public comment concerning dusting from moving trains at its December 1996 meeting, has led the Joint Subcommittee to the conclusion that the problem of fugitive coal dust from moving trains has been substantially solved. It does recommend, however, that annual informational updates continue to be supplied by NS so that prompt consideration of further action may be taken should the situation change for the worse (see Appendix G).

Respectfully submitted,

Madison E. Marye, Chairman
V. Earl Dickinson, Vice Chairman
Richard J. Holland
Yvonne B. Miller
Malfourd W. Trumbo
Flora D. Crittenden
George W. Grayson
Raymond R. Guest, Jr.
George H. Heilig, Jr.

APPENDICES

Appendix A:	Senate Bill No. 566 (1991)
Appendix B:	Senate Joint Resolution No. 1 (1992)
Appendix C:	Senate Joint Resolution No. 201 (1983)
Appendix D:	Senate Joint Resolution No. 27 (1994)
Appendix E:	Senate Joint Resolution No. 267 (1995)
Appendix F:	Senate Joint Resolution No. 34 (1996)
Appendix G:	Recommended Legislation

APPENDIX A

1991 SESSION

LD5046124

SENATE BILL NO. 566

Offered January 10, 1991

A BILL to amend the Code of Virginia by adding a section numbered 56-428.1, relating to covers on certain railroad rolling stock; penalty.

Patrons—Marye and Schewel; Delegate: Putney

Referred to the Committee on Commerce and Labor

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 56-428.1 as follows:

§ 56-428.1. Certain rolling stock to be covered; contents not to escape; penalty.—Except in cases of emergency occurring on the road which will not permit compliance with this section, it shall be unlawful for any person operating a railroad as a common carrier in the Commonwealth to run or permit to be run over its tracks, outside of yard limits or in transfer service, any railroad car being used to transport coal unless it is so covered as to prevent its contents from blowing, dropping, sifting, leaking, or otherwise escaping.

Any violation of this section shall constitute a misdemeanor punishable by a fine of not more than \$100. Each car operated in violation of this section and each day during which a car is operated in violation of this section shall constitute a separate offense.

Official Use By Clerks

Passed By The Senate

- without amendment []
with amendment []
substitute []
substitute w/amdt []

Passed By

The House of Delegates

- without amendment []
with amendment []
substitute []
substitute w/amdt []

Date: _____

Date: _____

Clerk of the Senate

Clerk of the House of Delegates

APPENDIX B

1992 SESSION
ENGROSSED

SENATE JOINT RESOLUTION NO. 1

Senate Amendments in [] - February 5, 1992

Continuing the Special Subcommittee Studying Measures to Reduce Emissions from Coal-carrying Railroad Cars as a joint subcommittee.

Patrons—Schewel and Marye

Referred to the Committee on Rules

WHEREAS, in recent years, some residents whose dwellings are in close proximity to certain rail lines have reported problems with fugitive coal dust; and

WHEREAS, coal dust blowing off trains onto nearby homes and automobiles is said to be a costly nuisance that also might pose health hazards to affected residents; and

WHEREAS, Senate Bill 566 and House Bill 1163 were introduced at the 1991 Session of the General Assembly to address these citizen concerns; and

WHEREAS, a special subcommittee was established to further study the issues presented by the legislation during the interim; and

WHEREAS, the Special Subcommittee determined that citizens and businesses residing along these lines have experienced periodic problems arising from coal dust emissions and that a prompt, responsible, and practical solution needs to be found; and

WHEREAS, the panel was informed of a study to be conducted for a Virginia-based rail coal carrier to determine the extent of the fugitive coal dust problem, to isolate possible causes, to conduct test-site evaluations, and to examine potential remedies; and

WHEREAS, the Special Subcommittee recognizes the initial efforts of the rail and coal industries to address the problem and believes that the findings of the industry study could lead to a timely and equitable solution; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Special Subcommittee Studying Measures to Reduce Emissions from Coal-carrying Railroad Cars be continued as a joint subcommittee to review the results of the industry study and to make appropriate recommendations, if necessary. The membership of the Joint Subcommittee shall remain the same as the Special Subcommittee, with any vacancy to be filled [~~in the same manner as the original appointment.~~ by the Senate Committee on Privileges and Elections, the Speaker of the House of Delegates and the Governor, as appropriate.]

The Joint Subcommittee shall complete its work in time to submit its findings and recommendations to the Governor and the 1993 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

The indirect costs of this study are estimated to be \$8,465; the direct costs of this study shall not exceed \$4,860.

Implementation of this resolution is subject to the approval and certification of the Joint Rules Committee. The Committee may withhold expenditures or delay the period for the conduct of the study.

APPENDIX C

1993 SESSION

LD9023733

SENATE JOINT RESOLUTION NO. 201

Offered January 15, 1993

Continuing the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-carrying Railroad Cars.

Patrons—Schewel, Holland, R.J. and Miller, Y.B.; Delegates: Ball, Grayson, Guest, Mayer and Stieffen

Referred to the Committee on Rules

WHEREAS, in recent years, some residents whose dwellings are in close proximity to certain rail lines have reported problems with fugitive coal dust; and

WHEREAS, coal dust blowing off trains onto nearby homes and automobiles is said to be a costly nuisance that also might pose health hazards to affected residents; and

WHEREAS, Senate Bill 566 and House Bill 1163 were introduced at the 1991 Session of the General Assembly to address these citizen concerns; and

WHEREAS, a joint subcommittee was established pursuant to Senate Joint Resolution No. 1 of 1992 to study the issues presented by the legislation; and

WHEREAS, the Joint Subcommittee determined that citizens and businesses residing along these lines continue to experience periodic problems arising from coal dust emissions; and

WHEREAS, the Joint Subcommittee wishes to receive the results of a study by a Virginia-based rail coal carrier in 1993; and

WHEREAS, the Joint Subcommittee believes that finding an equitable solution for all parties is in the best interests of the citizens of the Commonwealth; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-carrying Railroad Cars be continued to review the results of the rail company's study and to make appropriate recommendations, if necessary. The membership of the Joint Subcommittee shall remain the same with any vacancy to be filled by the Senate Committee on Privileges and Elections and the Speaker of the House of Delegates, as appropriate.

The Joint Subcommittee shall complete its work in time to submit its findings and recommendations to the Governor and the 1994 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

The indirect costs of this study are estimated to be \$8,465; the direct costs of this study shall not exceed \$4,860.

Implementation of this resolution is subject to the approval and certification of the Joint Rules Committee. The Committee may withhold expenditures or delay the period for the conduct of the study.

Official Use By Clerks

Agreed to By The Senate

- without amendment []
with amendment []
substitute []
substitute w/amdt []

Agreed to By The House of Delegates

- without amendment []
with amendment []
substitute []
substitute w/amdt []

Date: _____

Date: _____

Clerk of the Senate

Clerk of the House of Delegates

APPENDIX D

1994 SESSION

LD3116733

SENATE JOINT RESOLUTION NO. 27

Offered January 18, 1994

Continuing the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars.

Patrons—Schewel, Holland, R.J., Marye, Miller, Y.B. and Saslaw; Delegates: Ball, Grayson and Mayer

Referred to the Committee on Rules

WHEREAS, the General Assembly established the Joint Subcommittee in 1992 pursuant to Senate Joint Resolution No. 1 in response to complaints by residents and businesses in close proximity to certain rail lines in the Commonwealth of blowing coal dust; and

WHEREAS, the Joint Subcommittee determined that periodic problems arising from coal-dust emissions do exist for some of the Commonwealth's citizens; and

WHEREAS, a consultant to a Virginia-based rail carrier has conducted a study to examine issues presented by fugitive coal dust; and

WHEREAS, significant progress has been made in determining the amount of coal losses during transit and the key factors responsible for fugitive emissions; and

WHEREAS, the consultant's December 1993 report recommended that the most promising solutions to fugitive coal dust emissions from rail cars include critical slope management of load-top profiles and use of chemical binders; and

WHEREAS, the consultant further recommended a one-year test period during which dust-control products, load-top profiles and surface-binder applications can be evaluated; and

WHEREAS, an agreement has been reached between the rail carrier and a coal shipper to conduct a pilot project in 1994 that involves changing loaded-car profiles and applying surface treatments and bonding agents to loaded coal; and

WHEREAS, the Joint Subcommittee believes it should monitor and evaluate this project; and

WHEREAS, the Joint Subcommittee determined that citizens and businesses continue to experience episodes of coal dust emissions; and

WHEREAS, the Joint Subcommittee and the General Assembly believe that finding an equitable solution for all parties is in the best interests of the Commonwealth; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars be continued to receive comments from affected parties, monitor and evaluate the pilot project and make appropriate recommendations, if necessary. The membership of the Joint Subcommittee shall remain the same with any vacancy to be filled by the Senate Committee on Privileges and Elections and the Speaker of the House of Delegates, as appropriate.

The direct costs of this study shall not exceed \$4,050.

The Joint Subcommittee shall complete its work in time to submit its findings and recommendations to the Governor and the 1995 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for processing legislative documents.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may withhold expenditures or delay the period for conducting the study.

APPENDIX E

1995 SESSION

LD0659733

SENATE JOINT RESOLUTION NO. 267

Offered January 13, 1995

Continuing the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars.

Patrons—Schewel, Holland, R.J., Marye and Miller, Y.B.; Delegates: Ball, Grayson, Guest, Heilig and Mayer

Referred to the Committee on Rules

WHEREAS, the General Assembly established the Joint Subcommittee in 1992 pursuant to Senate Joint Resolution No. 1 in response to complaints of blowing coal dust by residents and businesses in close proximity to certain rail lines in the Commonwealth; and

WHEREAS, the Joint Subcommittee determined that periodic problems arising from coal-dust emissions do exist for some of the Commonwealth's citizens; and

WHEREAS, a consultant to a Virginia-based rail carrier has conducted a study to examine issues presented by fugitive coal dust; and

WHEREAS, significant progress has been made in determining the amount of coal losses during transit and the key factors responsible for fugitive emissions; and

WHEREAS, the consultant's December 1993 report recommended that the most promising solutions to fugitive coal dust emissions from rail cars include critical slope management of load-top profiles and use of chemical binders; and

WHEREAS, the consultant further recommended a one-year test period during which dust-control products, load-top profiles and surface-binder applications could be evaluated; and

WHEREAS, an agreement was reached between the rail carrier and a coal shipper to conduct a pilot project in 1994 that involves changing loaded-car profiles and applying surface treatments and bonding agents to loaded coal; and

WHEREAS, the Joint Subcommittee learned that the pilot project was effective in reducing coal dust emissions; and

WHEREAS, additional coal shippers have agreed to work with the rail carrier to expand implementation of the project initiated in 1994; and

WHEREAS, the Joint Subcommittee determined that citizens and businesses continue to experience episodes of coal dust emissions; and

WHEREAS, the Joint Subcommittee and the General Assembly believe that reaching an equitable solution for all parties is in the best interests of the Commonwealth; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars be continued to receive comments from affected parties, monitor and evaluate the industry's actions and make appropriate recommendations, if necessary. The membership of the Joint Subcommittee shall remain the same with any vacancy to be filled by the Senate Committee on Privileges and Elections and the Speaker of the House of Delegates, as appropriate.

The direct costs of this study shall not exceed \$4,050.

The Joint Subcommittee shall complete its work in time to submit its findings and recommendations to the Governor and the 1996 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for processing legislative documents.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may withhold expenditures or delay the period for conducting the study.

APPENDIX F

1996 SESSION

960634701

SENATE JOINT RESOLUTION NO. 34

Offered January 18, 1996

Continuing the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars.

Patron—Marye

Referred to the Committee on Rules

WHEREAS, the General Assembly established the Joint Subcommittee in 1992 pursuant to Senate Joint Resolution No. 1 in response to complaints of blowing coal dust by residents and businesses in close proximity to certain rail lines in the Commonwealth; and

WHEREAS, the Joint Subcommittee determined that periodic problems arising from coal dust emissions do exist for some of the Commonwealth's citizens; and

WHEREAS, a consultant to a Virginia-based rail carrier conducted a study to examine issues presented by fugitive coal dust; and

WHEREAS, significant progress has been made in determining the amount of coal losses during transit and the key factors responsible for fugitive emissions; and

WHEREAS, the consultant's December 1993 report recommended that the most promising solutions to fugitive coal dust emissions from rail cars include critical slope management of load-top profiles and use of chemical binders; and

WHEREAS, the consultant further recommended a one-year test period during which dust-control products, load-top profiles and surface-binder applications could be evaluated; and

WHEREAS, in 1994, an agreement was reached between the rail carrier and a coal shipper to conduct a pilot project to change loaded-car profiles and apply surface treatments and bonding agents to loaded coal; and

WHEREAS, the Joint Subcommittee learned that the pilot project was effective in reducing coal dust emissions; and

WHEREAS, additional coal shippers agreed to work with the rail carrier to expand implementation of the project initiated in 1994; and

WHEREAS, in 1995, the Joint Subcommittee learned that implementation of the program continued, and that by the end of the first quarter of 1996, approximately 80 percent of the estimated 27 million tons of coal annually that have been found to be dusty would be subject to dust-control techniques; and

WHEREAS, the Joint Subcommittee also learned that the rail company and other coal producers had plans to extend the program to the remaining dusty coals during 1996; and

WHEREAS, the Joint Subcommittee believes that it is an appropriate entity to monitor the implementation and performance of the industry's program; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Subcommittee Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars be continued to receive comments from affected parties, monitor and evaluate the industry's actions and make appropriate recommendations, if necessary. The membership of the Joint Subcommittee shall remain the same with any vacancy to be filled by the Senate Committee on Privileges and Elections and the Speaker of the House of Delegates, as appropriate.

The direct costs of this study shall not exceed \$4,050.

The Joint Subcommittee shall complete its work in time to submit its findings and recommendations to the Governor and the 1997 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for processing legislative documents.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may withhold expenditures or delay the period for conducting the study.

APPENDIX G

SENATE JOINT RESOLUTION NO. _____

1 Requesting the annual submission of certain information to the General Assembly.

2 WHEREAS, in 1992, the General Assembly established the Joint Subcommittee
3 Studying Measures to Reduce Emissions from Coal-Carrying Railroad Cars in response to
4 complaints of blowing coal dust by residents and businesses close to certain railroad lines;
5 and

6 WHEREAS, in response to the work of the Joint Subcommittee, the affected railroad
7 companies, in cooperation with the coal companies whose products they transport, were able
8 to identify and employ techniques and technologies that have significantly reduced the amount
9 of coal dust blown from moving trains; and

10 WHEREAS, although the Joint Subcommittee has not found legislative action by the
11 General Assembly in this area to be either necessary or desirable at the present time, it is
12 highly desirable that the General Assembly be kept abreast of actions by railroad companies
13 and coal producers that may affect the amount of coal dust blown from moving trains so that
14 timely action may be taken if such should prove necessary or desirable in the future; now,
15 therefore, be it

16 RESOLVED by the Senate, the House of Delegates concurring, That information on
17 actions and activities having or likely to have an impact on coal dust blown from trains
18 operating in or through Virginia, including but not limited to the number, frequency, and
19 location of complaints from the public about coal dust blown from trains, be made available by
20 affected railroad companies at least annually to members of the General Assembly through
21 offices of the Clerk of the Senate and the Clerk of the House of Delegates.

22 #

