REPORT OF THE
JOINT SUBCOMMITTEE STUDYING

The Mine Safety Law of 1966

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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REPORT OF THE JOINT SUBCOMMITTEE STUDYING THE VIRGINIA MINE SAFETY LAW OF 1966

TO: The Honorable George F. Allen, Governor,
and
the General Assembly of Virginia

I. EXECUTIVE SUMMARY

Accidents at the Southmountain Coal Company, Inc., Mine #3 in Wise County and the W. S. Frey Company limestone quarry in Frederick County, which combined to cause the deaths of ten miners, illustrate the continuing necessity for an effective mine safety law. The Joint Subcommittee's efforts focused on ways that the Commonwealth may improve mine safety in order to prevent similar tragedies.

The Joint Subcommittee found that the 1966 Law is in need of a comprehensive redrafting. The recommendations of the Joint Subcommittee are incorporated in proposed legislation attached as Appendix 19. Major policy recommendations of the Joint Subcommittee include the following:

1. The frequency of mandated complete mine inspections should be reduced for underground mines from four times annually to twice annually. For surface mines, the frequency of inspections should be reduced from twice a year to once a year. However, surface mineral mines that are inspected by the federal Mine Safety and Health Administration should not be subject to state inspection. The resources saved by reducing the minimum number of inspections should be reallocated to increasing the number of spot inspections at mines which, based on an assessment of the risks at a mine, pose the greatest danger of an accident.

2. Mine licenses should be subject to revocation if the operator exhibits a pattern of willful violations of the mine safety laws that result in imminent danger.

3. Mine inspectors should be authorized to issue notice of violation upon finding a failure to comply with the mine safety laws. The notice should specify a period of time in which corrective action is to be taken; if it is not completed, an inspector may issue a closure order. Recipients of such a notice should have the right to administrative review of the issuance of a notice of violation.

4. Inspectors should also be authorized to issue closure orders upon finding a violation which constitutes an imminent danger, to preserve an accident scene, and to stop the operation of a mine without a license. Mine operators should be entitled to prompt judicial review of the issuance of a closure order.

5. The mine safety laws should be enforceable by injunctions. Courts should be able to issue injunctions prohibiting the continued operation of a mine if the operator's history of noncompliance with the law or history of being issued closure orders establishes that he will not comply with the mine safety laws.

6. The certification of miners to conduct certain specialized tasks should be conducted by separate boards for coal miners and mineral miners. Persons commencing work in mines after January 1, 1996, should be required to obtain a general miner certificate. This new certification will require a demonstration of knowledge of mine safety laws and first-aid procedures.

7. Miners with certificates for coal mining tasks should be required to meet continuing education requirements. Certificates for mineral mining tasks should be subject to renewal every five years.

8. The law should establish separate sets of technical standards for underground coal mines, surface coal mines, underground mineral mines, and surface mineral mines. These technical standards should be set forth in prescriptive statutes for the two types of coal mines, and should largely be established by regulation for the two types of mineral mines.

9. The state's role in safety training should be increased. The program should rely on federal training requirements, and should seek to assist operators and miners achieve compliance. The Commonwealth should increase the resources for safety training.

10. The identity of persons making complaints of violations of the mine safety laws to the Department should be kept confidential. However, the Department should provide a copy of the complaint form (without the name of the complainant) to the mine operator.

11. The existing criminal sanctions for violations of the mine safety laws should continue. The laws should not provide for civil penalties. The state should be authorized to request the Attorney General to prosecute criminal violations if the local Commonwealth's Attorney declines to act.

II. AUTHORITY FOR STUDY

The 1993 Session of the General Assembly enacted House Joint Resolution 645 (Appendix 1), establishing a Joint Subcommittee to study the need for modifications to the Virginia Mine Safety Law of 1966.

The Subcommittee was composed of 13 members who were appointed in the following manner: five members of the House of Delegates; four members of the Senate; and four citizen members, appointed by the Governor, to represent coal mine workers, mineral mine workers, coal mine operators, and mineral mine operators.

The Joint Subcommittee was directed to complete its work and submit its findings to the 1994 Session of the General Assembly.

III. BACKGROUND INFORMATION

A. Virginia's Mining Industry

The Department of Mines, Minerals and Energy (DMME) is responsible for administering state laws and regulations applicable to surface and underground coal mining and mineral mining. Data presented by Kathy J. Reynolds, Deputy Director for Resource Management, which is reproduced at Appendix 2, reveals that the number of regulated mines and miners has declined over the past five years. From 1988 through 1992:

- The number of surface coal mines dropped from 172 to 127; underground coal mines from 373 to 297; and surface mineral mines from 558 to 497, while the number of underground mineral mines increased from 3 to 4.

- The number of mineral mine workers declined from 5,199 to 4,045, while the number of underground and surface coal miners declined from 11,106 to 9,009.

- Production of minerals fell from almost 94 million short tons to less than 71 million short tons.

- Coal production, which exceeded 46 million short tons in 1988, declined to 42.5 million short tons in 1992.

- While underground coal production dropped from 38 million short tons to 34 million short tons, surface coal production increased from 7.9 million short tons to 8.1 million short tons.

Despite the declining figures for mines, miners, and production, the value of sales has held steady over the period 1988 through 1991. Coal sales increased from $1.576 billion to $1.632 billion, while mineral sales decreased from $506 million to almost $416 million.

Much of the decline in the number of mineral mines, mineral mine workers, and mineral sales was attributed to the decision of the Virginia Court of Appeals in Commonwealth v. May Brothers, Inc., 11 Va. App. 115 (1990). In this case the court held that "the simple removal of dirt from a construction site, without more, does not constitute 'mining' as contemplated by the legislature in Code § 45.1-180." The Department applied this interpretation to the Mine Safety Law, and has ruled that "borrow pits," or dirt mines, do not constitute mineral mines for purposes of the Mine Safety Law. As a result, the figures in Appendix 2 for mineral mines after 1990 exclude data for these types of operations.

The rates for violations and closure orders held steady or increased over this five-year period. The frequency of closure orders issued by the Department per 200,000 production hours worked increased from 2.04 to 2.46 for coal mines, and from 0.52 to 0.95 for mineral mines. The frequency of violations at coal mines per 200,000 production hours worked dipped slightly from 50.17 to 47.77, while the frequency of violations at mineral mines rose from 19.26 to 30.87.

The rates for accidents and fatalities in coal and mineral mines have generally remained steady over the period. The accident rate per 200,000 production hours in coal mines dipped slightly over this period from 10.71 to 10.07 (after rising to 12.15 in 1989), and the rate in mineral mines fell from 6.81 to 5.84 in each of the last two years (after peaking at 8.32 in 1990). The rate of fatalities in mineral mining has increased from 0.042 to 0.053. The fatality rate in coal mines jumped from 0.041 in 1988 to 0.150 in 1992. The high fatality rate in 1992 is attributable primarily to the deaths of eight miners in the Southmountain Coal Co. No. 3 Mine explosion in December 1992.

B. History of Mine Safety Law

The General Assembly's earliest coal mine safety law was enacted as Chapter 178 of the 1912 Acts of Assembly. This measure, codified as Chapter 76 of the 1919 Code of Virginia, established a division of mines in the Bureau of Labor and Industry Statistics. This law also created the position of Inspector of Mines, who reported to the Commissioner of Labor and Industry. The law, which applied to coal mines employing five or more miners, required inspections of each mine once every six months. The Inspector was empowered to order mines closed if found to be in an unsafe condition. Violations were punishable by fines of $50 to $250, or ten to 90 days imprisonment.

The law was rewritten by Chapter 150 of the 1940 Acts of Assembly. The scope of the law was expanded to include quarries. The 1940 rewrite also created a three-person Board of Examiners to conduct worker certification, increased the frequency of coal mine inspections to every three months, and added special provisions for gassy mines.

In 1950, the legislature recodified the Virginia Code and created a Chapter 45 with eight chapters addressing mine safety and related topics, including weights and measures, rights of adjacent owners, and oil and gas.

The last major redrafting of the mine safety laws occurred in 1954. Following a 1953 study by the legislative Commission on Mine Safety, the first six chapters of Title 45 were named the Virginia Mine Safety Law of 1954, which included a chapter addressing emergency seizure of coal properties by the Commonwealth. The 1954 bill added much new detail regarding blasting, hauling, and ventilation practices. It also included a requirement for annual licensing of commercial coal mines.

Twelve years later the General Assembly recodified Title 45, thereby creating the current Title 45.1 and the Virginia Mine Safety Law of 1966. This recodification, enacted as Chapter 594 of the 1966 Acts of Assembly, changed the format, but not the substance, of the mine safety laws.

Though the Mine Safety Law had been amended numerous times in the intervening years, it has not been comprehensively reviewed since the 1953 study. One noteworthy event during this period was the creation of the Department of Mines, Minerals and Energy in 1984. DMME contains the Division of Mines which previously had been within the Department of Labor and Industry. DMME also contains a Division of Minerals to administer the regulatory programs for mineral mines.

C. Federal Mine Safety Program

The federal-state relationship with respect to mine safety is rare, if not unique, in Virginia. Most other federal-state programs involve delegation of implementation responsibilities by the federal government to the Commonwealth. Programs where Virginia has "primacy" for a federal program include the Occupational Health and Safety Act and federal environmental regulations. The Commonwealth's program for ensuring the health and safety of miners differs from these programs because it coexists with an independent federal program which addresses many of the same issues. The fact that Virginia has a mine safety

program does not affect the implementation of the federal mine safety program within the Commonwealth.

Inspectors from the federal Mine Safety and Health Administration of the U.S. Department of Labor (MSHA) conduct periodic inspections of mines to ensure compliance with the Federal Mine Safety and Health Act of 1977 (P.L. 95-164). The federal mine safety program provides that violations of health or safety standards are subject to civil penalties of up to $50,000 per day. In addition, willful violations are criminal offenses punishable by fines of up to $25,000 or one year of imprisonment, or both, for a first offense, or up to $50,000 or five years of imprisonment, or both, for subsequent offenses. 30 U.S.C. § 820.

A state is not required to have a separate mine safety program, and states with little mining activity, such as Maryland, have eliminated their state program and rely solely on the federal mine safety program. Most of the other states with substantial coal mining activity in this region conduct their own mine safety programs independently of the federal program. Many states, including Georgia, South Carolina, and Maryland, do not operate their own regulatory programs for mineral mining.

D. Mine Safety Laws and Programs of Other States

The Joint Subcommittee received briefings comparing the Mine Safety Law with the corresponding laws of Kentucky, West Virginia, Alabama, Ohio, Illinois, and Pennsylvania, and the federal Act. A chart summarizing the comparison is attached as Appendix 3.

All of the mine safety statutes shared several features. The laws generally establish detailed prescriptive standards by statute rather than delegating to an administrative agency the authority to promulgate standards in regulation. As is the case with most of the states surveyed, Virginia's law focuses on miner safety issues, and relies on MSHA to address health standards. Virginia's existing law is also typical in providing combined standards for underground and surface operations and for coal and mineral mining. Only Alabama and Pennsylvania prescribe separate standards for underground and surface mining, and for coal and mineral mining.

The comparison revealed several areas where Virginia's safety requirements are more stringent than those of the other jurisdictions. Virginia is one of three states with standards for diesel equipment used underground, and for surface impoundments. Only one other state (Alabama) regulates vertical ventilation holes and gas wells. West Virginia is the only state other than the Commonwealth that provides for government-certified mine rescue crews.

The Joint Subcommittee also compared the Commonwealth's mine safety program with the programs of the federal government and the six states mentioned above. The results are summarized in a chart attached as Appendix 4. Virginia's program shares many features with the majority of the other jurisdictions, including conducting inspections, providing technical assistance, and certifying miners for specific tasks. Features of the Commonwealth's mine safety program that differed appreciably from other programs surveyed include:

- Spot inspections are provided for in every program except those of Virginia, Alabama, and Pennsylvania;

- Confidentiality of whistle blowers is guaranteed in every program except Virginia and Kentucky;

- Frequency of underground mine inspections is less only in Kentucky, and many require more frequent inspections;

- Off-site prep plants are not covered by the programs of three states (Virginia, Kentucky, and Alabama);

- Issuing citations for "regular" violations during technical assistance visits is permitted under the program of every state except Virginia, where only imminent danger violations can be cited;

- Technical assistance for mineral mines is provided by every state except Virginia and Alabama;

- On-site safety training is provided by every program except Virginia's;

- New-miner training and continuing education are required in every other state except Pennsylvania, which does not mandate new miner training; and

- Use of an advisory board in the coal safety program is a feature of only Virginia and Pennsylvania; all other states except Alabama have policy-making and/or regulatory boards.

E. Relationship Between Violations, Closure Orders, and Accidents

A critical indicator of the effectiveness of Virginia's Mine Safety Law is its success in addressing the causes of accidents and fatalities. The Department of Mines, Minerals and Energy conducted an analysis of the relationships between the

causes of mining accidents and fatalities, violations of mining standards, and closure orders issued by the Department. The data for mineral and coal mining is attached in Appendices 5 and 6, respectively.

Conrad Spangler, Director of the Division of Mineral Mining at DMME, concluded that mine safety law and regulations address the cause of mineral mining accidents in 75 percent of the incidents studied between 1988 and 1992. (Page 1 of Table 5, Appendix 5) Within this time period, the percentage of accidents and fatalities for which the cause was addressed by the Mine Safety Law increased from 50 percent to 91 percent. Mr. Spangler attributed the increase in part to the ability to keep the mineral mining standards current by amending the mining regulations. The mineral mining regulations were most recently rewritten in 1989. The major causes of accidents and fatalities in the mineral mining industry that are not addressed by law or regulation are inadequate task and hazard training, mobile equipment, and improper work practices. (Page 5 of Table 5, Appendix 5) The law currently allows regulations to be promulgated to address mining conditions and practices, but not training and work practices.

A similar analysis of data pertaining to the coal mining industry was presented by Harry Childress, Chief of the Division of Mines at DMME. Mr. Childress cited figures from the U.S. Bureau of Mines that 73 percent of mining injuries are due to human error. Slightly more than half (52 percent) of the coal mining injuries and fatalities analyzed between 1988 and 1992 were due to causes addressed by the Mine Safety Law. (Page 2 of Table 4, Appendix 6) Of the incidents attributed to causes addressed by current laws, 58 percent involved mine conditions and 42 percent involved mining practices. Of the 48 percent of coal mining accidents and fatalities for which the cause was not addressed by current law, the three most common causes involved haulage, equipment operation and maintenance, and walkways and travelways. (Page 5 of Table 4, Appendix 6)

At the request of the Joint Subcommittee, data was compiled by MSHA regarding fatal accidents in coal and mineral (or "metal and non-metal") mines from 1988 to 1992 nationally and in Virginia, Kentucky, Maryland, Tennessee, and West Virginia. The information is attached as Appendix 7. The data classifies each fatal accident according to its cause. The information also addressed whether the accident was attributable to a violation, and whether the accident was due to mine conditions or practices.

The designation of an accident as being caused by a condition rather than a practice, or the reverse, involves the subjective judgments by the person reviewing the data. Making the distinction was often difficult. Where an accident was found to have resulted from both mine conditions and practices, the MSHA data attributed it to mine conditions. This approach is the opposite of that taken by DMME in its classification of accidents included in Appendices 5 and 6. The Department grouped accidents due to both conditions and practices according to

their primary cause, and those for which the primary cause could not be determined were counted as resulting from mining practices. Another cause of the differences between the MSHA statistics and those prepared by DMME is that the state's analysis with respect to coal mines was based on a sample of accidents and fatalities, while the federal agency looked at all fatalities.

The MSHA data addresses both "events" and fatal injuries. A comparison of the MSHA data to information presented by DMME on fatal injuries in coal mines provides some interesting comparisons. Nationally, MSHA found that 68 percent of the fatal injuries were attributable to violations; in Virginia, DMME found the figure is 58 percent. While according to MSHA's analysis 74 percent of the fatal injuries nationwide were attributed to mine conditions, the fatal injuries in Virginia were found by the DMME to be attributable equally to mine conditions and mining practices. This difference may be due (to an unknown degree) to the different approaches taken by MSHA and DMME in categorizing accidents which resulted from a combination of mine conditions and mining practices.

The Department subsequently quantified the fatal incident rates for Virginia, the nation, and the four adjacent states, for coal and metal/non-metal mining, based on the MSHA data. The results are reproduced at Appendix 8. The analysis reveals that Virginia's fatal incident rates for both coal and mineral mining from 1988-1992 were higher than the corresponding national rates. Virginia suffered 40 fatalities in 104.4 million production hours in coal mining, and 6 fatalities in 38.7 million production hours in mineral mining, over this five-year period. The fatal incident rate for coal mining in Virginia (0.077) was over twice the rate for metal and nonmetal mining (0.031). The corresponding fatal incident rates for all states are 0.047 for coal mining and 0.029 for metal and nonmetal mining. The rate, based on 100 workers per year, was determined by multiplying the number of fatalities by 200,000 and dividing by the number of production hours.

The Joint Subcommittee conducted a lengthy investigation of the relationship between those mines with high rates of violations and those mines with high rates of closure orders, injuries, and fatalities. Data compiled by DMME reveals that, with respect to mineral mines, there was a significant correlation between the rates of closure orders and the rates of injuries and violations. The 25 percent of mineral mines with the highest rate of citations for violations per 200,000 hours of production also experienced between 68 and 97 percent of the closure orders, between 39 and 79 percent of the lost time injuries, and between 13 and 100 percent of serious injuries in the years from 1988 to 1992. The data for mineral mines is compiled in Appendix 9.

The rates of lost time injuries per 200,000 production hours, based on number of violations, reveals that the 25 percent of mineral mines with the most violations had much higher rates of lost time injuries (3.30) than did the other 75 percent of mineral mines (0.74) in 1992. However, the serious injury rate for the mineral

mines in the top quartile for violations in 1992 was less (0.13) than it was for mineral mines in the bottom three quartiles (0.24).

The patterns noted for mineral mining were not repeated upon examination of the coal mining violation rates. The 25 percent of coal mines with the highest rate of citations for violations received between 41 and 68 percent of closure orders, between 11 and 16 percent of lost time injuries, and between 15 and 19 percent of serious injuries, in the five years studied. The percentage of fatalities occurring in mines in the top quartile based on their rate of violations was 20 percent or less in each of the years except 1991, when 6 of 9 deaths (67 percent) occurred in the 25 percent of mines with the highest rate of violations. The data for coal mines is compiled in Appendix 10.

The rate of lost time injuries for the 25 percent of coal mines with the greatest number of violations in 1992 was significantly higher (11.97) than it was for mines in the bottom 75 percent (9.49). Similarly, the rate of serious injuries for the quarter of coal mines with the most violations (1.16) was higher than for the other three-quarters of coal mines (0.73). With respect to the rate of fatalities in 1992, however, there was an inverse relationship between the mines with the greatest number of violations and those with the most fatalities. While the rate of fatalities in the 25 percent of coal mines with the most violations was zero, the rate of fatalities in the 75 percent of coal mines with the fewest violations was 0.17 per 200,000 hours of production. The same inverse relationship, with the coal mines included in the quartile of mines with the most violations having lower-than-average fatality rates, was found in three of the other four years analyzed. A statistically valid analysis of the fatality rates in mineral and coal mines could not be calculated due to the small number of fatal accidents in the years studied.

Additional data supplied by the Department also revealed that the mines with the highest rates of safety law violations varied from year to year. Twelve mineral mines were included among the 25 percent of mineral mines with the most violations in each of the five years from 1988 to 1992. The number of mineral mines with four appearances in the top quartile of violators in this five-year period was 17; 28 appeared three times; 58 appeared twice; and 133 mineral mines appeared on one annual list of the top quartile of violators. The results for coal mines were similar. Four coal mines were among the 25 percent of coal mines with the most violations in each of the five years. Thirteen coal mines made the list of top violators in four of the five years; 23 made the list for three of the five years; 184 made the list in two of the five years; and 196 coal mines made an appearance on the annual list only one time.

F. Criminal Prosecutions of Mine Safety Law Violations

The Mine Safety Law provides that, unless otherwise specified, a willful violation is punishable as a Class 1 misdemeanor. The Department reported that between 1988 and 1992 it had issued more than 24,000 notices of violations of the Law.

In response to inquiries by the Joint Subcommittee, the Department provided a summary of the criminal charges filed during this period for violations of the Mine Safety Law. In this five-year period, 34 misdemeanor charges were filed. Two of the charges were elated to mineral mining. Of the 34 charges filed, 20 resulted in a criminal conviction. A copy of the summary is attached as Appendix 11.

According to the Department, several factors contribute to the disparity between the number of violations cited and the number of criminal charges filed. One factor is the requirement that the violation of the Law be willful, which is often difficult to prove. The Law has been interpreted to read that a violation must have been on the part of a mine's operator or his agent, and that the miners are not subject to criminal sanctions. Decisions to prosecute are made by the locality's Commonwealth's attorney. Since compliance with the Law is the main objective, prosecution has not been sought when a noticed violation is corrected. Finally, the low ratio of criminal prosecutions to cited violations may be attributed in part to the practice of not pursuing misdemeanor charges under the state law if federal prosecutors pursue criminal proceedings under the federal mine safety law.

G. Southmountain Coal Company, Inc., Mine No. 3 Explosion

Much of the current interest in mine safety issues has resulted from the explosion and deaths of eight coal miners at the Southmountain Coal Company, Inc., Mine No. 3 on December 7, 1992. Though the scope of the study pursuant to HJR 645 was not directed to examine the causes of the Southmountain disaster, this accident featured prominently in the work of the Joint Subcommittee.

DMME Investigation Department personnel presented a summary of the agency's investigation of the explosion to the Joint Subcommittee. The Mine Safety Law grants DMME the jurisdiction to investigate explosions and serious accidents. The investigation, completed May 6, 1993, revealed that the volume of air on the actively mined section was inadequate to carry away explosive methane gas. The gas migrated to the working section from abandoned areas where the deteriorating roof was releasing gas from the Kelly seam of coal. The probable source of ignition of the methane was believed to be a butane cigarette lighter. The ensuing methane explosion suspended and ignited coal dust, which increased the magnitude of the explosion.

The report identified the following contributing factors to the explosion: (i) failure to ventilate active and abandoned panels and maintain adequate ventilation controls; (ii) failure to apply proper amounts of rock dust to the mine roof, face and ribs; (iii) failure to properly conduct weekly examinations of abandoned areas and pre-shift examinations of active workings; (iv) failure to comply with the approved roof control plan; and (v) failure to prohibit the use of, and failure of some miners to refrain from carrying, smokers' articles while underground. A synopsis of the DMME investigation is attached as Appendix 12.

H. Report of Governor's Task Force of Advisors

Former Delegate James W. Robinson was appointed by former Governor Wilder to chair a Task Force of Advisors charged with assisting the DMME in their investigation of the Southmountain mine explosion. The duties of the Task Force included suggesting any specific recommendations that could prevent a similar disaster. The Task Force delivered its report to the Governor on August 6, 1993, and presented a summary of its findings to the Joint Subcommittee at its meeting on August 17, 1993, in Wise. A copy of the final report of the Task Force is attached as Appendix 13.

The recommendations of the Task Force consist of suggested revisions to investigation techniques and methodology, suggestions to prevent accidents and fatalities, and other recommendations. Suggested revisions to investigation techniques and methodologies include reviewing the interview process, authorizing the Chief of the Division of Mines to order autopsies, requiring an internal review of DMME activities for accidents involving three or more fatalities, reviewing the role of the Mine Safety Board, and using robotics in dangerous rescue operations.

The Task Force suggested that accidents and fatalities could be prevented by (i) strengthening requirements of the Mine Safety Law related to methane detection and violation; (ii) improving compliance with existing mine safety law; (iii) providing more effective miner involvement in ensuring safe work conditions; (iv) improving the knowledge of miners to work safely; and (v) improving the preparedness of operators and the DMME to respond to mine disasters and emergencies.

Five other recommendations were presented by the task force. First, DMME should fully consider the recommendations of the 1983 report of Governor Robb's Advisory Committee on Mine Safety made following the McClure mine disaster. Second, the Joint Subcommittee was asked to review oversight of the existing law concerning prohibited acts by miners, including substance abuse. Third, DMME inspectors should review all record books during regular inspections and compare

their findings to preshift and onshift examination books. Fourth, copies of the completed examination reports should be posted at a visible location. Finally, the length of time between a disaster and the commencement of the investigation's interviews should be reduced.

DMME Deputy Director Kathy Reynolds provided the Joint Subcommittee with a report summarizing the Department's implementation of the recommendations made in 1983 by Governor Robb's Advisory Committee on Mine Safety. The Department reported that implementation of 13 of the 16 recommendations has been completed, and is ongoing with respect to the remaining three recommendations. These three recommendations call for the Department to share information with the federal mine safety inspection program, to take a stronger role in the education, training, and certification of miners, and to conduct an extensive review of the safety requirements contained in the surface coal mining laws. The Department's summary of actions implementing the recommendations of the 1983 Advisory Committee on Mine Safety is attached as Appendix 14.

I. Inspection Responsibilities for Surface Mineral Mines

The Joint Subcommittee spent an appreciable amount of time sorting information regarding safety inspections at surface mineral mines. DMME personnel reported at the first meeting that it was responsible for inspecting approximately 500 surface mineral mines in Virginia. However, at the Joint Subcommittee's September 29 meeting, MSHA representatives told the members that the federal agency inspects all of the mineral mines in Virginia of which it has knowledge, and that currently the federal agency inspects approximately 200 surface mineral mines. This figure includes approximately six off-site processing facilities that are not within the jurisdiction of the Virginia Mine Safety Law.

Several theories were advanced by MSHA, DMME, and others regarding the discrepancy of approximately 300 surface mineral mines. An MSHA district manager suggested that the difference in the number of mineral mines may be due to MSHA's exclusion of borrow pits from its definition of a mineral mine. Kathy Reynolds, Deputy Director of DMME, discounted this explanation because the 497 state-inspected mineral mines do not include borrow pits, which were dropped from DMME regulation following the Virginia Court of Appeal's 1990 decision in Commonwealth v. May Brothers, Inc. Following that decision, borrow pits became subject to jurisdiction of the Virginia Occupational Safety and Health (VOSH) program.

However, the Department of Labor and Industry (DLI) does not conduct regular, periodic safety inspections of such sites. Such sites will be inspected if (i) DLI receives a complaint from an employee or (ii) the borrow pit is located on a

construction project otherwise scheduled for inspection. DLI does not keep figures on the number of borrow pits subject to its jurisdiction. In determining whether an operation is a borrow pit (and thus within VOSH jurisdiction), DLI is guided by the OSHA-MSHA Interagency Agreement, 44 FR 22827 (April 17, 1979).

A chart prepared by DMME, a copy of which is attached as Appendix 15, shows the number of producing and nonproducing mineral mines inspected by DMME, MSHA, or both, by commodity. Of the 302 mineral mines inspected by DMME but not by MSHA, 133 were nonproducing. While MSHA inspectors do not inspect surface nonproducing mines, these mines are required to be inspected under state law semiannually if they are licensed by the Commonwealth. Current Virginia law does not require that a mine be producing in order to hold a license. A small number of inactive mines are sites that are pending release of their reclamation bond, which is held for two growing seasons following the completion of revegetation work.

Neither DMME nor MSHA inspect sites classified as borrow pits. DMME uses an Excavation Activity Evaluation Chart in determining whether a site qualifies as a mine and is therefore subject to the Mine Safety Law's inspection requirement. A copy of the evaluation chart is attached as Appendix 16. The criteria applied by DMME include, among other qualities, whether the material is processed before use and whether it is sold commercially. Though MSHA does not use the same flow chart, it uses the same criteria in determining whether a site is under MSHA or OSHA jurisdiction. The definitions of a borrow pit used by state and federal agencies does not appear to explain the difference in number of sites each agency regulates. However, the case-by-case determination of whether a particular site constitutes a mineral mine or a borrow pit may vary because these criteria may be applied differently by individual DMME and MSHA inspectors.

The Subcommittee was unable to determine the extent to which these reasons account for the difference in the number of mineral operations inspected under the federal and state programs. An exact calculation may require a site-by-site review of each operation. In addition, there may be other reasons for the difference. A spokesman for MSHA acknowledged that it will add additional sites to its list if it becomes aware of operations that meet the federal definition of a mineral mine. Mr. Cone asked on several occasions that DMME communicate directly with MSHA personnel in order to resolve the discrepancy, and DMME advised the Subcommittee that it had already provided MSHA with a list of all the mines it inspects which MSHA does not. The Department was specifically requested to send a copy of the list to the MSHA Northeast District Office in Mars, Pennsylvania.

IV. ACTIVITIES OF THE JOINT SUBCOMMITTEE

A. Meetings and Public Hearings

The members of the Joint Subcommittee dedicated themselves to the task of reviewing and rewriting Virginia's mine safety laws. The full Joint Subcommittee held business meetings on June 14, July 13, August 17, August 30, September 29, October 6, October 27, November 23, and December 16, 1993, and January 6 and January 11, 1994.

A subcommittee created to review technical requirements for coal mining, consisting of Senator Reasor, Senator Wampler, and Delegate Phillips, met in Big Stone Gap on November 12 and December 13, 1993. The coal subcommittee also met in Richmond on January 5, 1994. A subcommittee created to review technical requirements for the mineral mining industry held one meeting in Richmond on December 7, 1993. The Minerals Subcommittee was composed of Delegate Smith, Delegate Stump, and Senator Norment. A special subcommittee appointed to review the issue of criminal penalties, consisting of Senator Reasor, Mr. Hudson, Senator Wampler, Delegate Stump, Mr. Cone, and Delegate Smith, met in Richmond on January 5, 1994.

The Joint Subcommittee conducted three public hearings during the course of its work. Two of the public hearings were held in Southwest Virginia in conjunction with the Joint Subcommittee's August 17 business meeting held in Wise. The hearings were held at Clinch Valley College on August 17, and at Southwest Virginia Community College on August 18. A summary of the testimony received at these two hearings is attached as Appendix 17.

The Joint Subcommittee held its third public hearing in Richmond on August 30, 1993. Of the 23 persons who spoke at the public hearing, 14 represented the mineral mining industry. Most of these speakers objected to duplication by the state of the inspection and enforcement aspects of the federal mine safety law. They argued that directing state efforts to training and education was a better way to allocate scarce state resources. They asserted that the incidence rates for states with no state safety program and states with training and education-based programs were, on average, better than for those states with an enforcement and inspection-based program, such as Virginia's. Four state mineral mine inspectors, speaking on their own behalf and not as DMME representatives, testified that the existing inspection program provides a valuable service. They challenged the industry's assertions that duplication and conflicting requirements of the state and federal mine safety programs are serious problems.

Several members of the Joint Subcommittee toured a surface coal mine and an underground coal mine in Southwest Virginia on July 14, 1993. The tours,

arranged by Pittston Coal Management Group, provided the members with a valuable opportunity to become familiar with coal mine conditions and practices.

B. Survey of Mining Stakeholders

In order to solicit in-depth responses from a cross section of the groups that are directly affected by the Commonwealth's mine safety program, the Joint Subcommittee authorized staff to conduct an opinion survey. The survey, consisting of 68 questions addressing the adequacy of the Virginia Mine Safety Law and issues for future discussion, was distributed to 464 persons selected from groups with a stake in mine safety issues.

One hundred seventy-five persons completed and returned the questionnaires. A copy of the opinion survey form is attached as Appendix 18, on which the most frequent response has been circled for each question. In addition, the attached copy of the survey has been completed to show the number of respondents identifying with the four industry segments (80 for underground coal, 50 for surface coal, 84 for surface mineral, and 16 for underground mineral mining). Part C of the attached survey form has also been completed to show the breakdown among respondents based on their industry experience, years of experience, and position. Subcommittee members were also provided with the written comments supplied by over 100 of the respondents.

The survey results indicated that the respondents disapprove of a "one size fits all" approach to mining safety laws. Over 70 percent of those answering the questionnaire disagreed with the use of identical standards for underground and surface mining operations, and for coal and mineral mining operations. Another trend spotted from the survey results was general satisfaction with specific technical standards in the Mine Safety Law. Most respondents felt that the current Law is adequate in such areas as certification, transportation, equipment, roofing and rib control, fire prevention and control, and mine rescue. This sense of satisfaction was less apparent with the current standards for dust, other airborne contaminants, and noise levels.

The survey results also indicate that the biggest areas of possible controversy, as indicated by divisions between industry segments and position classifications, involve broad policy questions rather than technical issues. Some of the areas where survey responses did not reveal any consensus include (i) the inclusion of standards for miner health; (ii) assessing civil penalties for program violations; (iii) the establishment of standards through the regulatory process rather than by statutory law; and (iv) paying for mine safety services through the assessment of fees.

V. DELIBERATIONS AND RECOMMENDATIONS

The work of the Joint Subcommittee may be divided into three categories. First, the members addressed issues relating to the proper policies of the Commonwealth with respect to mine safety. Second, the technical requirements applicable to coal and mineral mining, both on the surface and underground, were reviewed. Finally, proposed legislation incorporating the decisions of the Joint Subcommittee on the policy issues and the technical requirements for the four types of mining was analyzed and approved. A copy of the draft legislation endorsed by the Joint Subcommittee is attached as Appendix 19.

A. Policy Issue Deliberations

The Joint Subcommittee utilized a series of decision briefs to reach consensus on policy issues. This approach, which was presented to the members at their second meeting, required members to choose the optimal approach to an issue. Prior to acting on an issue, the members were provided with a decision brief containing background information, a range of possible options, and several advantages and disadvantages believed to follow from each option. The decision brief process proved effective in ensuring that the Joint Subcommittee maintained its schedule of comprehensively reviewing the Mine Safety Law prior to the 1994 Session of the General Assembly.

The critical element of the decision brief process is the cumulative effect of Subcommittee decisions. Preliminary, conceptual decisions were made early in the study process. As the work of the Joint Subcommittee progressed, the issues became more narrowly focused as they reflected the group's previous decisions. Consequently, the members were constantly building upon previous policy choices. The decision brief process helped the members produce a comprehensive redrafting of the mine safety law reflecting an internal logical consistency that would have been difficult to replicate if a less structured, ad hoc approach had been used.

A chart summarizing the options selected by the Joint Subcommittee as it worked through the decision brief process is attached as Appendix 20. The chart also indicates where the decision of the Joint Subcommittee with respect to the decisions is reflected in the proposed legislation (Appendix 19).

1. Construction of Law

The first decision brief presented to the subcommittee asked whether all segments of the mining industry should be regulated by one comprehensive mine safety law or by separate standards of a mining law for the different types of mining in Virginia. The decision brief noted that the current statutory provisions

governing underground coal mining, surface coal mining, underground mineral mining, and surface mineral mining are unclear, and ambiguous. After a discussion of the options, the Joint Subcommittee unanimously endorsed the establishment of four sets of standards, with one governing underground coal mines, one governing surface coal mines, one governing underground mineral mines, and one governing surface mineral mines. This option was perceived as being the most responsive to the needs of varying constituencies, providing clear standards, and eliminating possible cross-over effects.

2. Extent of Coverage of Standards

The 1966 Law authorizes the Chief of the Division of Mines to promulgate standards and regulations covering both the health and the safety of persons employed at mines. The law primarily includes prescriptive standards for miner safety, but laws and regulations address some health issues. Among the health issues addressed in the Law are dust, noise, trauma (first aid), airborne contaminants in mineral mining, and the use of diesel equipment in coal mining.

The Joint Subcommittee decided at its August 30 meeting that standards for both surface mineral mining and surface coal mining should cover miner safety only. This decision was subsequently modified on the recommendation of the subcommittee reviewing technical requirements of mineral mining. With respect to underground mineral mining and underground coal mining, the subcommittee chose to endorse the establishment of comprehensive coverage for miner safety and limited coverage for miner health.

3. Mandated vs. Voluntary Requirements

Currently, the Mine Safety Law mandates standards for certain conditions and practices that mine operators are required to maintain, and enforces those requirements through inspection and certification programs. Though the safety standards in the law may not be as detailed as those in the federal mine safety law, they reflect an attempt to be comprehensive.

The members endorsed an approach for all four types of mining whereby Virginia will mandate a limited set of mine conditions and practices, and will operate a state inspection program to achieve compliance. Limiting the scope of Virginia's regulation of mine conditions and practices was seen as allowing the Department's resources to be focused on areas of greatest danger, while avoiding duplication of some federal regulations. The precise conditions and practices to be regulated under this limited approach were established by the Coal and Mineral Subcommittees, discussed below.

MSHA requires that certain work be done by certified or qualified persons, but does not issue certifications to, or provide training for, miners. Virginia and the other states surveyed operate miner certification programs. The Joint Subcommittee agreed that Virginia's mine safety laws should continue to provide a program for the issuance of certificates to qualified miners.

The Department is now providing miner safety training through a job safety analysis program. DMME also maintains two classroom instructors who conduct education for individuals seeking certification by the Board of Examiners. MSHA imposes training requirements on all mines except surface crushed stone, sand, and gravel mines. DMME does not now provide assistance to operators to comply with federal training requirements. The Joint Subcommittee decided not to establish state-mandated training requirements, and instead to rely on existing federal training requirements. In addition, members agreed that the state should provide training to assist operators and miners in achieving compliance with these federal requirements.

4. Statutory Structure

Most of the provisions of the Mine Safety Law establish prescriptive standards governing underground coal mining. Safety provisions in the mine safety law apply to mineral mining "insofar as such laws are applicable thereto" (§ 45.1-33). While the Chief has general authority to promulgate regulations for mineral mining, he may do so with respect to coal mining only where prescriptive standards are not provided.

The Joint Subcommittee considered whether the Mine Safety Law should continue with its current structure, or whether the law should establish general guidance and delegate to the Chief the authority to promulgate specific standards. The members initially decided that the best option for both coal and mineral mining is to establish prescriptive standards in law and delegate authority to promulgate regulations where no prescriptive standards are established. However, the Joint Subcommittee decided at the December 16 meeting that, based on the recommendations of the Minerals Subcommittee, the technical requirements for mineral mining should be set forth in regulation rather than in statute.

5. Penalties for Violations of Law

The Joint Subcommittee considered and rejected the establishment of a system of civil penalties for violations of the Mine Safety Law because it would duplicate the civil penalties that can be assessed by MSHA. The current system of enforcement, which provided that violators are subject to criminal sanctions, closure orders, and injunctions, was endorsed unanimously as being sufficient to compel compliance.

The Joint Subcommittee also grappled with the issue of who should be liable for violations of the mine safety law. The Joint Subcommittee was informed that the Attorney General's Office has advised DMME that individual miners are not subject to criminal prosecution. The members endorsed a proposal that the law be drafted to establish liability for the operator, an individual, or both, depending on the provision. This recommendation applies to coal and mineral mining, both on the surface and underground.

6. Definition of Underground Mineral Mine

The Joint Subcommittee concurred that the types of operations and activities constituting underground mineral mining should remain as currently provided in the Mine Safety Law, with one exception. At present, an operation is defined as a mine through the completion of final reclamation, concurrent with release of the reclamation bond. The members agreed that the definition of such a mine only include areas through the time initial reclamation activities are completed. The definition of a mine should continue to include only those sites where minerals are being produced for commercial use. The areas of a site that constitute part of a mine under current law should continue to be included. These areas are the working face, other active underground areas of the mine, inactive areas, shaft and slope construction, and areas at the surface used for material transportation and storage, impoundments, and refuse disposal.

7. Definition of Surface Mineral Mine

The Joint Subcommittee narrowly agreed that the types of operations and activities constituting surface mineral mining should include areas where exploration activities are being conducted. This is consistent with current DMME practice to regulate activities that disturb the surface in any way except by drilling. The Joint Subcommittee agreed, as it did with underground mineral mining, to exclude activities occurring after the completion of initial reclamation activities in the definition of a mine. With respect to defining mining based on the use of the mined product, the members agreed that the definition of a mine should include only operations producing mineral products for commercial use. The members recommended that the definition should exclude sites owned and operated by the government from the definition of a mine. They also endorsed codifying the May Brothers decision by including only sites used for mineral extraction where a mineral is mined for its unique characteristics or where processing is required.

Currently, a surface mineral mine includes on-site surface facilities such as mills, offices, shops, and load-out facilities, but excludes off-site surface facilities. The Joint Subcommittee decided at its December 16 meeting that offices should be excluded from the definition of a surface mineral mine. Members otherwise agreed that the law should continue to cover on-site surface facilities only.

8. Definition of Underground Coal Mine

The Joint Subcommittee decided that an underground coal mine should include areas being used for coal extraction activities and for preparation of the site. The members also agreed that a mine should include these areas through the time initial reclamation activities are completed, rather than through final reclamation and bond release. The members do not want the definition to include areas where exploration activities are being conducted. Underground coal mines should include only sites where coal is being produced for commercial use. Areas of the site that should be subject to the law include the working face, other active underground areas, shaft and slope construction, the land area at the surface, on-site surface facilities other than offices, and areas used for drilling vertical ventilation holes.

9. Definition of Surface Coal Mine

The Joint Subcommittee decided that the types of operations and activities that should be included in the definition of a surface coal mine should be the same as those for an underground coal mine. Accordingly, they should include areas being used to prepare a site and areas being used for extraction activities, through the time initial reclamation activities are completed. The Joint Subcommittee recommended that the definition of a mine include surface coal mines producing coal products for commercial use, but not sites owned and operated by government entities. Surface coal mines should include coal extraction areas and other active areas, and on-site surface facilities other than offices. At their December 16 meeting, the members agreed that off-site surface facilities should not be included in the area comprising a surface coal mine.

10. Licensing Provisions

The Mine Safety Law currently provides that a license to operate a coal mine may be revoked or denied if the holder or applicant has been convicted of tampering with a methane monitor or possessing smoking materials in an underground coal mine. The Joint Subcommittee recommended that the purpose of a mine license should be shifted from only collecting administrative information and raising revenue to requiring that a set of legal requirements be satisfied as a condition for the right to undertake mining. The Joint Subcommittee discussed the necessity of changing the current law in light of the Wise County Circuit Court's issuance of a default decree in Childress v. Mullins enjoining an individual from operating any mine in Virginia. The defendant had been cited for numerous violations of the Mine Safety Law, and the court based its decision on his demonstrated wanton disregard of the law.

Current Virginia law provides that licenses are issued for mines, and not for mine operators. Though a mine license must identify its operator, holding an operator's license is not a prerequisite to obtaining a mine license. The members agreed to continue licensing mines but not mine operators.

A related set of decisions addressed the types of information that should be included in a mine license application. Currently, applicants must provide administrative information, an annual map, and an annual report. The members concurred that, in addition to the currently provided data, applicants should supply information regarding persons with overall business responsibility for the mine's operations, information regarding key personnel and emergency contacts, and information necessary to make risk assessments.

The majority of members adopted a recommendation that mine licenses should be revoked or denied for a pattern of willful violations of the Mine Safety Law that result in imminent danger. The Joint Subcommittee also recommended that a revocation or denial of a mine license should be appealable directly to court, rather than pursuant to the Administrative Process Act.

The consensus of the Joint Subcommittee is that the existing requirement of an annual license fee should be maintained. The members also decided that the amount of the annual fee should be kept at current amounts. The current annual fee for a mine license is $75 for coal mines and most mineral mines, and $20 for small sand and gravel operations. A chart comparing mine licensing fees in Virginia with other states is attached as Appendix 21.

11. Mine Inspections

The Mine Safety Law requires that underground mining operations be inspected at least every 90 days, and that surface mining operations be inspected at least every 180 days. The Joint Subcommittee endorsed proposals that the minimum number of required complete inspections of coal mines and mineral mines be reduced to one half of the number of inspections currently required, and that additional inspections for each mine be based upon an evaluation of risk for each mine. With respect to surface mineral mines, the Joint Subcommittee further voted to adopt a proposal that DMME inspect only those sites that are not inspected by MSHA. The determination of which mineral mines are not inspected by MSHA shall be made by a "joint agency committee of cooperation" composed of MSHA and DMME personnel.

By deciding that spot inspections should be based on evaluations of risk at mines, the Joint Subcommittee had to decide how risks should be evaluated. The members concurred that an integrated risk assessment measure should be developed. This measure will be used to estimate the potential danger of activities

or conditions in order to target more frequent and more comprehensive inspections at the more hazardous facilities.

The members reached a consensus regarding the factors to be included in a risk assessment measure at their meeting of January 6, 1994. They agreed that DMME should be authorized to develop an internal policy for assessing the comparative risks associated with mines. Though the policy is to be developed with the assistance of working groups, it is not intended to be promulgated pursuant to Article 2 of the Administrative Process Act because, as provided in subdivision 2 of subsection C of § 9-6.14:4.1, it applies to the agency's internal procedures for allocating its resources.

The members concurred that the timing of DMME inspections of coal mining and underground mineral mining operations should be coordinated with MSHA to maximize coverage. For example, state inspections should be held between MSHA inspections. This approach was touted as maximizing coverage by avoiding situations where little time elapses between the two inspections.

Regarding the sharing of information between state and federal inspectors, the subcommittee recommended that DMME inspectors should review the most recent MSHA inspection reports prior to their inspections, and should share the results of their inspections with MSHA. This recommendation would apply to coal and underground mineral mining, but not to surface mineral mining because of the decision to eliminate duplicate state and federal inspections. The elimination of state inspections at surface mineral mines which are federally inspected is not intended to limit the jurisdiction of DMME personnel from investigating accidents or responding to complaints.

A related decision involved the comprehensiveness of DMME review of mine records during inspections. The members adopted a suggestion that the current practice, under which the most recent mine records are comprehensively reviewed, be continued.

The Joint Subcommittee was told that mine inspectors have not always been provided with transportation to a mine's working face promptly upon their arrival at an underground coal mine site. The Mine Safety Law now provides that operators provide inspectors with proper facilities for entering mines and making inspections. The members decided that operators should also be required to provided inspectors with transportation to the working face in a reasonable amount of time.

12. Mine Safety Complaints

The Mine Safety Law currently does not contain a procedure for persons to file complaints regarding mine safety. Similarly, the current law is silent on issues relating to the confidentiality of persons making complaints, and the protection of complaining miners from retaliation by their employers. After hearing that the cost of North Carolina's toll-free hotline for complaints exceeds $3,300 annually, members of the joint subcommittee recommended that the current procedure for making complaints be continued. This procedure allows complaints to be made to DMME by phone at DMME offices or at inspectors' homes, in person at DMME offices, or in person to inspectors.

Two current practices for notifying miners of the process for making complaints were endorsed by the Subcommittee. These practices require operators to provide a copy of the Mine Safety Law (including sections on complaint procedures) to all new miners, and to post complaint numbers in a readily available location at all mines.

The Joint Subcommittee expressed concern about both protecting persons filing complaints from discrimination, and protecting operators from frivolous complaints by employees. The members decided that the Mine Safety Law should protect the confidentiality of persons making complaints, while requiring that DMME give to the operator a copy of the complaint form without the name of the person making the complaint.

13. Defining Responsible Persons

The Mine Safety Law currently defines specific persons, such as the operator, superintendent, and supervisor, associated with mine operations, and assigns responsibilities to them. However, the lack of clarity of the existing definitions was criticized. The Joint Subcommittee voted to recommend that the Law utilize the definitions of persons contained in the federal Mine Safety and Health Act for both coal and mineral mining. The federal law contains definitions of an operator, agent, and miner. In addition, federal regulations define certified, competent, experienced, and authorized persons.

14. Civil Enforcement Mechanisms

The Mine Safety Law authorizes the Department to issue notices of any violations discovered during mine inspections, including recommendations made or actions taken to eliminate the violations. The Law also authorizes the agency to issue closure orders when (i) imminent or serious danger is discovered, (ii) an accident scene is being investigated, and (iii) a mine is being operated without a license. In addition, the agency is authorized to apply to court for an injunction where any violation of Title 45.1 (or any regulation) occurs or is threatened.

The Subcommittee recommended that, with respect to both coal and mineral mining, the issuance notices of violations should be permitted when the agency finds a violation of law or regulation. It also agreed that the Department should be authorized to issue closure orders when a person fails to take corrective action specified in a notice of violation, though the violation may not create a serious or imminent danger, provided that the closure order is not issued during the pendency of an administrative appeal of the issuance of the notice of violation.

The members concurred that a closure order should be lifted, and a notice of correction issued, upon a finding of compliance with the law or regulation. They also want the law to make clear that notices of violations and closure orders will be vacated if they are found to have been improperly issued.

The consensus of the Joint Subcommittee was that DMME should be able to obtain injunctions to compel compliance with a specific law or regulation after an operator has failed to correct a violation cited in a notice of violation or closure order. Courts should also be authorized to enjoin the continued operation of a mine or mines by a person upon a finding that compliance with the Mine Safety Law will not be maintained. A likelihood of future failure to maintain compliance can be evidenced by either a history of noncompliance, or by a history of closure orders being issued, at the mine or mines operated by the person. The Subcommittee chose to drop "threatened" violations of the Mine Safety Law as grounds for obtaining injunctive relief.

15. Appeals of Administrative Enforcement Actions

The Mine Safety Law currently does not provide a procedure for administrative or judicial review of the issuance of notices of violations, and allows only judicial review of the issuance of closure orders. Regulations promulgated for mineral mining establish a procedure for administrative review of notices of violations and closure orders through informal conferences. The Joint Subcommittee recommended that new procedures should be instituted to address both coal and mineral mining.

The decision of an inspector to issue a notice of violation should be subject to administrative review under the case decision process of the Administrative Process Act. The first stage of review would be an informal conference, to be conducted by the Chief of the Division of Mines (if it involves coal mining) or the Director of the Division of Mineral Mining (if it involves mineral mining). If an agreement is not reached following the informal conference, a formal litigated issues hearing would be held pursuant to § 9-6.14:12 of the APA. The hearing would be conducted by a hearing officer, with his recommendations being subject to review and approval by the Director of the Department. An unsatisfied party may then seek judicial review as provided in Article 4 of the APA.

The members also decided that operators should continue to have the right to appeal the issuance of a closure order immediately to circuit court. The law should not provide for administrative review of the agency's action. The burden of proof in such a case would rest with the operator, and the closure order would remain in effect pending the court's ruling.

16. Miner Certification

The Mine Safety Law provides that the power to certify miners is vested in a seven-member Board of Examiners. Certification is required for certain positions, including but not limited to mine foreman, section foreman, fire boss, and chief electrician. The Board, which currently covers both coal and mineral mining, may designate other positions as also requiring certification.

The members decided that separate boards should be established for coal and mineral mining. The board for coal mining should have five members, consisting of the Chief (who will be chairman), an underground mine industry representative, an underground miner, a surface mine industry representative, and a surface miner. With respect to mineral mining, the board of examiners should have seven members, consisting of the Division Director (who will be chairman), two surface mine industry representatives, two surface miners, one underground mine industry representative, and one underground miner.

With respect to both coal and mineral mining, the Joint Subcommittee voted to continue the current arrangement that the types of certification and qualifications are established by a combination of statutory law and agency regulation. Types of certifications will be established by statute, but the boards will have the authority to establish new types of certification and to specify the qualifications for obtaining certification by regulation.

The types of certifications to be included in statutory law should be different for coal and mineral mining. With respect to coal mining, the members recommended that all of the 20 existing certifications, except the fire boss certification, be continued. With respect to mineral mining, the Subcommittee endorsed a suggestion that mineral mining certifications be mandated for surface foreman, surface foreman open pit, underground foreman, surface blaster, electrical repairman, and for a new category of underground blaster. The existing mineral mining certifications for chief electrician, electrical maintenance foreman, and advanced first aid would not be required by statute.

In addition to these categories, the Subcommittee endorsed the establishment of a new general miner certification for both coal mining and mineral mining. The certifications would require a knowledge of first aid and a general working knowledge of the health and safety laws and regulations. The general miner

certification requirement will apply to all persons commencing work in mines after January 1, 1996.

The Joint Subcommittee recommended that certifications for coal mining be issued for the life of the miner, but that the board of coal mining examiners establish requirements for continuing education which must be met in order to maintain the certification. Certifications would be suspended if the continuing education requirements are not met, and the continued failure to meet the requirements would cause revocation of the certification. The board should also establish requirements that miners provide information needed by the board in connection with the continuing education requirement, such as the miner's current address.

The Joint Subcommittee recommended that most certifications for mineral mining be issued for a five-year period, after which they would expire unless renewed. An exception to the five-year period would be made for the general miner certification, which would have no fixed term. In order to renew a mineral mining certification (other than the general miner certification), a mineral miner would be required to be retested. Administrative information, such as the miner's address, would have to be provided as a condition of renewal.

The members agreed that, with respect to both coal and mineral mining, Virginia should adopt a limited reciprocity program. Miners certified in other states should be accepted automatically in the Commonwealth if the other state (i) recognizes certificates issued to miners in Virginia, and (ii) has requirements for certification that are substantially equivalent to those of Virginia. The Subcommittee endorsed keeping the current fee schedule, which establishes a charge of $10 per examination, for both coal and mineral mining.

The Joint Subcommittee concluded that standards for revocation of miner certifications should be established by statutory law rather than by regulation. This position, which applies to both coal and mineral mining, reflects the current law. Finally, the members agreed that the current arrangement regarding who is authorized to bring matters regarding certifications before a board should be continued. The current practice permits matters to be brought by miners, operators, and agency personnel.

17. Virginia Mine Safety Board

The nine-member Virginia Mine Safety Board serves as a regulatory working committee on issues relating to health and safety in coal mines. The Board is authorized to decide whether the number of required inspections at a qualifying mine may be reduced, though it has never been requested to do so.

Members elected to keep the current system of having one board addressing coal mining only. The Board should continue to serve as the regulatory working group for the development of health and safety regulations not under the jurisdiction of the Board of Examiners, and to provide general advice and recommendations on ways to increase health and safety for coal miners. The Joint Subcommittee also agreed that the Board should continue to be composed of nine members appointed by the Governor, with three members each being nominated by the Virginia Coal Association and the United Mine Workers of America, and with three being appointed from the Commonwealth at large.

18. Miner Training

The Joint Subcommittee agreed that, with respect to both coal and mineral mining, the Commonwealth should assist with new miner and refresher training required by MSHA. Virginia should also assist in providing classes and training desired by miners to obtain and maintain state certification. State employees should develop a voluntary state-approved curriculum and teaching materials and provide training paid from funds provided to DMME. The Department should be able to charge reasonable fees, not to exceed the cost of providing such services. The state curriculum for required new miner or refresher training would be developed by the Department to be consistent with MSHA requirements. Operators will not be required to provide mandatory MSHA training through this program, and use of any of the state training activities will be voluntary. The Department would not be required to charge participants in its voluntary training programs and may elect, for example, to provide training for unemployed miners at no cost.

Several options for enhancing state provision of coal miner safety training were debated. The Joint Subcommittee endorsed the existing voluntary on-site safety awareness training provided during the course of inspections. The "topic of the month" mining safety program was praised as an example of a valuable program for less safe mines. However, state funding of the program was eliminated in the budget for the 1990-1992 biennium. The appropriation for the program at the time of its elimination was approximately $260,000 annually.

Following a request by Senator Wampler at the Joint Subcommittee's August 17 meeting, a subcommittee, consisting of Senator Wampler, Delegate Stump, and Delegate Smith, was appointed to gather information regarding the cost of additional miner training and education. The subcommittee was charged with meeting with the Department to collect information regarding program costs.

The members approved an option calling for the state to provide intensive voluntary training and job safety analysis at small coal mines. Currently, a job safety analysis program for coal mining is provided through a grant from MSHA.

With respect to enhancing state mineral mining training, the members adopted two proposals. First, as with coal, the Department should continue to provide voluntary on-site safety awareness training as part of mine inspections. Second, the existing program of providing general safety talks, in a classroom atmosphere, should be continued.

At the November 23 meeting, the members adopted an interim recommendation that Governor Wilder be asked to include in his proposed budget an amount sufficient for the Department to reestablish the "topic of the month" mining safety program. This program had been operated for unsafe coal mines. A copy of Delegate Smith's letter to Governor Wilder is attached as Appendix 22. The efforts of the Joint Subcommittee resulted in the addition of $ 260,000 to DMME's budget for each year of the 1994-1996 biennium, earmarked for mine safety training.

19. Criminal Penalties

The Joint Subcommittee decided at its August 30 meeting that criminal penalties would be continued in the Mine Safety Law. Currently, all willful violations of the Mine Safety Law are punishable as a Class 1 misdemeanor unless otherwise specified. The members were presented with options that would have tied the severity of criminal sanctions to the type of violation, or decriminalized certain infractions. The Joint Subcommittee chose to leave the provisions regarding criminal penalties as now exist.

The members also dismissed an option that would have provided for administrative search warrants. The members agreed that, while the primary responsibility to prosecute criminal violations should rest with the local Commonwealth's attorney, if he declines to act the Department Director or the Chief may request the Attorney General to institute proceedings. This option is not intended to preclude the Department from seeking the appointment of a special grand jury when currently permitted.

B. Review of Technical Requirements

Pursuant to its policy decision that separate technical standards should be developed for underground coal mines, surface coal mines, underground mineral mines, and surface mineral mines, the Coal Subcommittee and Minerals Subcommittee reviewed technical requirement charts, compiled by DMME, in the course of compiling recommendations for the full Joint Subcommittee. Each technical requirements chart grouped existing and proposed standards into topical areas. The charts cited the source of the standards, such as existing law or regulation, recommendation of the Task Force of Advisors, or comments from public hearings or the opinion survey. For each listed standard, the chart identified

persons who would generally be held responsible for compliance with the standard, and the type of enforcement action generally appropriate to address a violation of the standard.

1. Underground Coal Mines

The Coal Subcommittee met in Big Stone Gap on November 11, 1993, to consider technical requirements for underground coal mining. The report of the Coal Subcommittee was acted on by the full Joint Subcommittee at its meeting on November 23, 1993. The requirements for underground coal mining are codified in Chapter 14.3 of the proposed legislation.

The recommendations of the Coal Subcommittee with respect to the 20 topics examined are as follows:

a. Roof Control and Ventilation: The existing technical standards for roof control were endorsed by the Subcommittee. A recommendation of the Governor's Task Force of Advisors requiring certified persons to show a thorough understanding of mining plans, to be determined by on-site examinations by mine inspectors, was adopted.

b. Transportation: The existing technical standards for transportation were endorsed by the Coal Subcommittee. Two proposed new standards were discussed. The first, which would have prohibited the pushing of supply cars underground, was not adopted. The second called for mantrips to be maintained on all working sections. This was also rejected, though the Subcommittee agreed that a provision should be added requiring that equipment for moving people be available, and the equipment should be able to provide access to and from all working sections within a reasonable time, as determined by the Chief.

c. Mechanical Equipment: The existing technical standards for mechanical equipment were ratified.

d. Hoisting: The members endorsed a suggested change to § 45.1-68(a), which currently states that a certified hoisting engineer does not need to be on duty at an automatic elevator. The recommended change calls for an automatic elevator operator (but not a certified hoisting engineer) to be available within a reasonable time as determined by the Chief. All other existing technical standards were adopted.

e. Mine Maps: The Subcommittee heard testimony that the current requirements that mine maps be submitted twice per year, and that bleeder plans be submitted annually, were unnecessary. The Coal Subcommittee received a

recommendation that maps be submitted once a year, but be updated when necessary. The full Joint Subcommittee declined to act on the suggestion.

f. Proximity of Mining to Gas and Oil Wells and Vertical Ventilation Holes: After discussing a proposal that the Chief be required to approve (and not merely be notified of) mining within 500 feet of a gas or oil well, the Coal Subcommittee agreed to ratify the current requirements.

g. Proximity of Mining to Abandoned Workings: The members adopted the existing technical standards.

h. Mine Openings and Escapeways: The members agreed to adopt an opinion survey recommendation that lifelines be required along escapeways. However, the requirement should apply only in the primary designated escapeway. Other current technical standards were adopted.

i. Illumination: Except for correcting obsolete references to the U.S. Bureau of Mines, the current technical standards were adopted.

j. Personnel Checking System: The existing provision was endorsed by the members of the subcommittee.

k. Smoking and Smokers' Articles: The Coal Subcommittee decided that these standards should be maintained in all respects.

l. Personal Protection: The current technical standards for personal protection were ratified.

m. Explosives and Blasting: The Coal Subcommittee was advised that references in current law to fuses, cardox blasting, and compressed air blasting are obsolete. Accordingly, all reference to these obsolete practices should be deleted. The other requirements in current law were ratified.

n. Flammable Oils; Diesel Powered Equipment: The Coal Subcommittee agreed that some requirement for particulate filters on diesel equipment should be adopted. The full Joint Subcommittee declined to adopt this suggestion. The other current technical standards were accepted by the Coal Subcommittee.

o. First Aid Equipment; Medical Care: The only change recommended by the Coal Subcommittee was to amend § 45.1-101.1 to allow first responders to satisfy the requirement that emergency medical care technicians be available at mines.

p. Fire Prevention, Fire Control: The Coal Subcommittee recommended adoption, with some clarification, of a recommendation of the Governor's Task Force of Advisors requiring operators, as part of the emergency response plans, to include

(i) maintenance of a list of next of kin for all employees, (ii) identification of waterlines, (iii) numbering system of brattice, and (iv) smoker search programs. The responsibility of notifying a miner's next of kin should be on the operator. Records of miners' next of kin should be kept at the mine site or at a central location which is readily accessible. The smoker search program is to track the requirements of federal regulations. The subcommittee endorsed all other current technical standards.

q. Electricity: The members considered but did not accept a recommendation requiring operators to maintain "dead man" switches on equipment. They also declined to endorse recommendations that would require two-way communications in extended areas of mines and the daily inspection of trailing cables. The subcommittee noted that references to the use of flame safety lamps as methane detectors should be deleted, and where appropriate a one percent methane level be substituted for the level of the gas that could have detected by such devices. Other current technical standards were ratified.

r. Ventilation and Mine Gases: The subcommittee agreed to recommend changing the current standard regarding evacuation of personnel following the failure of a mine fan. After rejecting a proposal that fan stoppage require immediate evacuation, the members agreed that each mine's fan stoppage plan include appropriate evacuation requirements. The plan is to consider, among other things, the size and number of fans, and the methane liberation qualities of the mine. In no event will the evacuation be permitted to commence more than 15 minutes after stoppage if ventilation is not restored.

The members took to the full Joint Subcommittee, without any recommendation, the suggestion that a ceiling on acceptable methane levels be set for bleeder plans. The full Joint Subcommittee established a maximum acceptable level of methane in bleeder plans at 4.5 percent.

The members adopted a recommendation of the Governor's Task Force of Advisors regarding the use of flame safety lamps. These devices may be used to detect oxygen deficiency, but not to detect methane.

The Coal Subcommittee heard that the recently enacted law prohibiting the tampering with methane monitors was overbroad. Methane monitors are used on equipment cutting rock away from the face, on bleeder entries, on roof bolting equipment, and on longwall shears. Industry representatives asked that the prohibition on disconnecting or bypassing apply only to monitors which are required by federal or state law. The full Joint Subcommittee reached a consensus on this issue at its meeting on January 6, 1994, which would allow methane monitors to be disconnected, by-passed or removed if they are not required pursuant to 30 CFR Part 75.342.

The Coal Subcommittee agreed that conflicting sections of the current law regarding the timing of on-shift examinations should be amended to require methane checks every 20 minutes. The members also recommended that operators be required to record actual readings of methane in the mine record books, and if the level detected is less than 0.1 percent, the entry will read "less than 0.1 percent detected." Other suggestions regarding the method of recording and posting information from preshift inspections and examinations were not accepted, though the members noted that the Department may request authorization to standardize reporting entries if necessary.

With regard to a related recommendation that copies of completed shift, preshift and onshift examination reports be posted on check-in boards, the subcommittee chose to refer the issue to the full Joint Subcommittee. Members expressed the opinion that there should be an intra-company communications mechanism, but reached no consensus on how it should be accomplished.

The Coal Subcommittee debated the adoption of the Task Force of Advisors regarding the frequency and methods of examining bleeder entries and abandoned areas. Current law requires weekly examinations. The members agreed to add the phrase "or more frequently as required by the bleeder plan" to the provision of § 45.1-65(i).

Another recommendation of the Task Force of Advisors calls for requiring a sufficient number of approved, properly maintained methane detection devices, with proper training for all miners inby the last open crosscut. The members accepted this recommendation with the clarification that while all miners should be trained to operate the devices, only miners inby the last open crosscut need to be trained and certified. This recommendation is included as § 45.1-161.231 of the recommended legislation.

Numerous other recommended changes in technical standards for mine ventilation were discussed but not adopted by the Subcommittee. These include: (i) establishing standards for levels of other airborne contaminants; (ii) requiring that isolated intakes be maintained smoke free, or free of power lines and belts; (iii) reviewing § 45.1-26 concerning prohibited acts by miners, including substance abuse; (iv) requiring reduced levels of dust on longwall faces; (v) requiring daily travel and examination of bleeder entries and more frequent inspection of gob areas; (vi) requiring operators to maintain all entries and bleeders open and passable throughout; (vii) requiring evacuation of affected mine sections when dangerous conditions occur; (viii) posting and training in approved ventilation plans; (ix) use of AMS to monitor belt air; (x) ventilation standards addressing new, fast-paced mining methods; (xi) greater volume of air in working forces; and (xii) setting a minimum air movement standard at 3,000 cubic feet per minute in all mine areas.

s. Vertical Ventilation Holes and Gas and Oil Wells: The current regulatory standards were ratified by the Coal Subcommittee in their current form.

t. Other: A proposed requirement for regulating the handling and disposal of hazardous waste was not endorsed.

A discussion of the duty to conduct examinations at underground coal mines evolved into a detailed review of the areas to be examined and the frequency of the examinations. On the basis of comments that the discrepancy between the terms used in the state and federal mining laws created confusion, the Coal Subcommittee met on January 5, 1994, to review the definitions of working face, working place, active workings, and abandoned workings.

The Coal Subcommittee agreed to adopt the federal definitions of working face (i.e., areas where coal is being extracted), active workings (areas where members are normally required to work or travel), and working place (i.e., areas inby the last open crosscut). However, where a change in the definition would change the area which is now being examined, the term should be changed to the corresponding term which most closely describes such area.

The Coal Subcommittee also agreed that the federal requirements regarding the areas to be subject to pre-shift and on-shift examinations be adopted. The federal requirements, which are set forth in 30 CFR §§ 75.360 and 75.362, are incorporated in proposed §§ 45.1-161.208 and 45.1-161.209. Other recommendations of the Coal Subcommittee included replacing the current term "active workings" with "active areas," "working place" with "active workings," and "abandoned workings" with "abandoned areas" in appropriate sections of the mine safety statutes. These recommendations of the Coal Subcommittee were adopted by the full Joint Subcommittee at its meeting on January 6, 1994.

2. Surface Coal Mines

The Coal Subcommittee met on December 13, 1993, in Big Stone Gap to consider technical requirements for surface coal mining. These recommendations were generally endorsed by the full Joint Subcommittee at its meeting on December 16, 1993. These requirements are set forth in Chapter 14.4 of the proposed legislation. The recommendations of the Coal Subcommittee with respect to the 20 topics examined are summarized below.

a. General Examinations, Record Keeping, and Reporting: The Coal Subcommittee concurred that the current statutory requirements applicable specifically to surface coal mining activities should be retained. Pre-shift examination of the work area was found to be unnecessary. On-shift examinations should occur once every production shift and at such other times designated

necessary due to dangerous conditions. The Subcommittee believed that mobile equipment should also be included in the examination and that a competent person should be allowed to do such inspection.

Examinations of silt retaining dams and mine refuse piles should be required daily, and should be conducted by a qualified person rather than a certified person. Provisions regarding air quality examinations when surface mines intersect underground mines, auger holes or other underground workings should be retained.

Tests for methane should be required in surface installations, enclosures or other facilities in which coal is handled or stored. The methane test should occur at least once each shift and prior to any repair work in which welding, cutting or open flame is used. This inspection should be done by a qualified person rather than a certified person. Certified persons should record, in the mine record book, actual methane readings taken during on-shift exams. In addition to the current reporting requirements, unplanned explosions should be reported and notification ten days prior to abandonment and ten days prior to resuming work after an abandonment of 30 days or more should be required.

b. Mine Maps: The requirement that a mine map be submitted only where mining could intersect underground workings, or auger, thin seam, or highwall mining should be retained.

c. Personal Protection: All current statutory sections applicable to both surface and underground coal dealing with personal protection should be retained. The Coal Subcommittee accepted a suggestion for requirements to restrict access to potential hazardous areas. The members did not agree that the Chief should be required to promulgate noise level standards. Operators should continue to be required to furnish car protection upon request.

d. First Aid Equipment and Medical Care: The current statutory requirements applicable to both underground and surface coal should be altered to require each mine to maintain adequate, sanitary first aid supplies at strategic locations so as to be available within a reasonably short response time. Statutory requirements, currently applicable to surface and underground mines, which require prompt evacuation and medical attention and safe transportation of injured from the site to areas accessible to emergency transportation, should be retained. Requirements that surface foremen be trained in first aid and that operators make first aid training available to all miners, currently applicable to both surface and underground coal mining, should be retained.

e. Fire Prevention: Current surface coal statutes should be retained as should the statutory provisions applicable to both underground and surface mining. Additionally, DMME regulations requiring precautions before applying heat,

cutting, or welding on any pipe or container that has contained a flammable or combustible material should be codified.

f. Surface Equipment: All current statutory provisions covering underground and surface coal mining should be retained. However, § 45.1-74 should be made clear that it does not apply to the use of an employee's personal vehicle to the site. The following additional standards were found to be appropriate: (i) requiring guarding around lighting that may present shock hazards; (ii) restrictions on where and how persons may be transported; (iii) setting standards for the safe operation of loading and haulage equipment; (iv) requiring rollover protection on certain equipment; and (v) requiring seat belts to be maintained and be worn.

g. Materials Handling: The subcommittee found that none of the suggested changes were necessary.

h. Travelways: The current statutory provisions applicable to surface coal mining, which require that stairways, platforms and runways be provided with handrails, guardrails, toe boards, be free of hazards and be kept in good repair, should be retained.

i. Loading and Haulage Areas: The current surface coal statute requiring provision for ladders, handrails, toe boards and platforms on machinery and equipment as necessary to provide accessible travelway should be retained. Several current provisions of the Surface Foreman Guide should be codified. These include requirements relating to: (i) the use of beams or guards on outer banks in certain areas; (ii) dumping and haulage areas being reasonably free of water and debris and of solid construction; (iii) the securing of dippers, buckets, scraper blades and similar movable parts when not in use; (iv) the use of truck spotters and lights; and (v) the haulage or moving of equipment. The Coal Subcommittee found that the current provisions for rail load-out facilities are adequate.

j. Hoisting: The Coal Subcommittee recommended the adoption of enabling legislation in this area to allow DMME, by regulation, to assure the safety of surface miners in hoisting activities.

k. Dust control: The current statutes applicable to both underground and surface mining should be retained. Other suggested standards were found to duplicate other programs.

l. Electricity: The current statutes directly affecting surface coal mining should be retained. Members endorsed a requirement that electric equipment be tagged and locked out by the person performing the electrical work. Electrical equipment and wiring should be examined as often as necessary, but at least once a month. Power circuits should be labeled to correspond with the unit or circuit they control. In addition, persons should be required to stay clear of certain equipment during

electrical storms. Other requirements regarding electrical equipment currently in statute should be retained.

m. Explosives and Blasting: The current statutes relating to surface coal mining operations should be retained. Current DMME regulations dealing with the separation of ammonium nitrate fuel blasting agent from other explosives should also be retained, except the five minute waiting period required before approaching a misfire area should be increased to fifteen minutes.

n. Drilling: The Coal Subcommittee agreed that drilling is an appropriate area for enabling legislation allowing DMME to develop regulations.

o. Ground Control: The Coal subcommittee concluded that the current statutory provisions for underground and surface coal duplicated other provisions dealing with safe conditions. The members concurred that three additional standards should be included in the Code, as follows: (i) all surface operations should establish and follow mining methods which ensure ground, wall, bench and bank stability in accordance with a ground control plan that would not have to be written and filed with DMME; (ii) scaling and removal of loose hazardous material from tops of pits and highwalls, banks, walls and benches to ensure safe working areas should be required and employees should be restricted from such areas when such hazardous conditions exist; and (iii) employees should be restricted from working between equipment and walls, benches, or banks if the equipment may hinder their escape from falling or sliding material.

p. Auger, Highwall, and Thin Seam Mining: The current statutory provisions applicable to both underground and surface coal should be adopted. In addition, the coal subcommittee agreed that the following additional standards should also be continued: (i) examination of highwall, work area and equipment prior to work, records of which shall be maintained for one year; (ii) examinations for methane and oxygen deficiency when an auger hole penetrates abandoned or mined out areas of underground mines; and (iii) requirements if methane or a deficiency in oxygen is detected.

The Coal Subcommittee recommended that certain standards which exist in regulations and other documents should be codified. These include: (i) prohibitions on entering an auger hole; (ii) requiring auger holes to be blocked before abandonment; (iii) safeguards around auger mining equipment; and (iv) provisions for auger machine operators who are exposed to hazards. The members noted that methods and technologies for auger mining would more than likely see a tremendous change in the not-too-distant future, and authority will be needed to deal with those changes.

q. Proximity of Mining to Gas and Oil Wells and Vertical Ventilation Holes: The Coal Subcommittee concluded that the current statutes applicable to underground and surface coal should be retained.

r. Compressed Air, Gases, and Boilers: The Coal Subcommittee found that this area is now regulated by other agencies, and further legislation is unnecessary.

s. Thermal Dryers: Approximately six thermal dryers are currently located in Virginia. They are currently regulated at the federal level. The Coal Subcommittee decided that further action by the Commonwealth is not necessary.

t. Shaft and Slope Construction: The current statutory provisions for shaft and slope construction and operations should be retained. In addition, MSHA-approved plans for sinking shafts and for slope excavation should be filed with DMME. The plans are for information purposes and not for approval or disapproval by DMME.

3. Surface Mineral Mines

The Minerals Subcommittee of the Joint Subcommittee studying the Mine Safety Law met on December 7, 1993, to consider the technical standards for surface mineral mining and underground mineral mining. The members agreed to recommend to the full Joint Subcommittee that the technical standards for both surface and underground mineral mining be set forth in regulation rather than in statutory law. The full Joint Subcommittee concurred in the recommendations of the Mineral Subcommittee at the meeting on December 16, 1993. Most of the standards regulating the conduct of such mining activities are already regulatory, rather than statutory. As a result of its decision that the requirements be set forth in regulation rather than in statute, the specific comments regarding changes to the existing regulations will be considered by DMME when it undertakes the next updating of the regulations.

With respect to surface mineral mines, the Minerals Subcommittee concluded that the existing technical requirements, with the proposed changes discussed below, will constitute comprehensive safety provisions for surface mineral mining. The technical standards were reviewed by the subcommittee in 16 topical areas with regard to (i) the adequacy of existing standards and the advisability of recommended changes; (ii) the persons who may be held responsible for compliance; and (iii) the appropriate remedies for noncompliance. The statutory provisions addressing the technical requirements applicable to surface mineral mining are set forth in Chapter 14.6 of the proposed legislation (Appendix 19). The changes to the existing technical standards recommended by the Mineral Subcommittee are as follows:

a. General Safety Provisions: Mine operators should be required to document the completion of miner task training. The miner should have to initial, and the operator sign, a document stating that the training for a specific task has been completed.

b. Air Quality and Physical Agents: Section 45.1-99, which requires the use of respirators for short-time exposure to gas, dust, fumes, and mist inhalation standards, is not now duplicated in regulations. The Minerals Subcommittee agreed that it should be moved from the Code to regulations.

c. Drilling: The Minerals Subcommittee discussed the requirement that a certified foreman inspect for hazards prior to drilling, and concluded that the issue of who should be qualified to do this task should be addressed in the review of the regulations.

d. Boiler and Pressure Vessel Equipment Requirements: The persons who may be held responsible for compliance with the requirement that safety devices on compressed air systems be checked daily should include the operator or his agent. In addition, the requirement of Regulation 8.16 should be clarified to read that compressed gas and liquid gas cylinders be secured in an upright position.

e. Safety Requirements for Mobile Equipment: The requirement that operators' cabs be constructed to permit operators to see "without straining" should be better defined. The requirement that cabs be equipped with heaters, air conditioners, or both should also be addressed during the regulatory process to clarify the provision that they are needed during periods of "extreme weather conditions." Finally, members agreed that the persons to be held responsible for compliance with the Regulation 9.34 (which requires sizing devices at dumps and transfer points be anchored securely) should include the operator and his agent, rather than a certified person.

f. Personal Protection: The members agreed to a recommendation that reflective tape or material be required on hats or clothing of persons working after dark. This recommendation should be made available for public comment in the Department's regulatory process.

g. Electrical: The Minerals Subcommittee endorsed a suggestion submitted in response to the opinion survey that the lockout and tagout requirements be strengthened. The members agreed that regulations should be reviewed, and the Department should consider requiring operators to supply printed tags, requiring every miner exposed to the danger to lock and tag both circuits and equipment, and consider the issue of individual locks. Miners, as well as operators and agents, should be held responsible for compliance.

h. Guards: Members agreed that, during the regulatory process, the Department should consider making operators and agents, as well as certified persons and miners, responsible for compliance with the regulations regarding guards being kept in place and being of substantial construction. Agents should be added to the classes of persons who can be held responsible for the equipment guarding regulations.

i. Health Standards: Notwithstanding the full Joint Subcommittee's previous decision that the surface mineral mining law address safety but not health, the Minerals Subcommittee agreed that certain health standards be retained in regulations. The subcommittee based this decision on the Joint Subcommittee's previous decision that surface mineral mines would be subject to state inspection if they are not inspected by MSHA. Regulation 5.3, which requires dust sources be wetted down or controlled by dry collection measures, should be left intact for all surface mineral mines. Regulation 5.6, which prohibits noise exposure exceeding the federal limits, should be kept only for those mines which are not being inspected by federal mine inspectors.

4. Underground Mineral Mines

The Commonwealth is currently host to five underground mineral mining operations: three limestone mines, one gypsum mine, and one gemstone mine. The Minerals Subcommittee concluded that the existing technical requirements, with the proposed changes discussed below, will constitute comprehensive safety and limited health provisions. The technical standards reviewed by the members address 17 topics.

As noted above, the Minerals Subcommittee agreed that the technical requirements should be set out in regulation rather than in statute. The Subcommittee reviewed several aspects of this topic, including (i) the adequacy of existing standards and the advisability of recommended changes; (ii) the persons who may be held responsible for compliance; and (iii) the appropriate remedies for non-compliance. The statutory provisions addressing technical requirements for underground mineral mining are set forth in Chapter 14.5 of the proposed legislation. The existing technical standards were endorsed by the Subcommittee with respect to each of the topics, with the following exceptions:

a. Fire Prevention and Control: The regulation prohibiting smoking or an open flame within 25 feet of stored flammable materials should be amended to require the posting of signs that flames are prohibited in the vicinity.

b. Drilling: Regulation 7.1 now requires drilling areas to be inspected for hazards prior to drilling. The members agreed with a suggestion that the type of inspection specifically include both sounding and visual inspection.

c. Safety Requirements for Mobile Equipment: The same suggestion regarding mobile equipment made for surface mineral mining was adopted with respect to underground mineral mining. The members also concurred that changes to Regulation 9.38 should be considered in the regulatory process. This regulation requires that a tow bar and safety chain be used to tow heavy equipment. The proposed change would limit the application of this regulation to equipment that is not being operated under its own power.

d. Personal Protection: The members agreed that a regulation should be promulgated requiring the use of reflective tape or material on workers' clothing.

e. Electrical: Members agreed that the lockout and tagout regulations regarding both mobile equipment and stationary machinery should be reviewed. The procedures for haulage equipment should apply to electrical equipment. Members agreed to make the same recommendations for tagout and lockout procedures as they did with surface mineral mining, discussed above. Finally, the subcommittee discussed the regulations requiring minimum clearances for electrical lines, and decided that if the current regulations were inadequate, specific problems could be brought to the Department's attention during the regulatory review process.

C. Legislative Proposal

Although the explosion at the Southmountain Coal Co., Inc., Mine No. 3 on December 7, 1992, heightened public awareness of the necessity for effective mine safety legislation, the scope of the study conducted pursuant to HJR 645 was not limited to any particular mine accident. Consistent with the joint resolution's charge that the Joint Subcommittee examine the need for modifications to the Mine Safety Law of 1966, the members conducted a comprehensive recodification of Virginia's mine safety statutes.

1. Introduction

An analysis of the Mine Safety Law indicated that it would benefit from a complete rewriting with respect to both its organization and its drafting. The 1966 Law was not organized in a manner that delineated its application to the various types of mining. The majority of specific prescriptive requirements of the law were directed at underground coal mining. However, § 45.1-33 provided that the provisions the Law "regarding safety to life and property shall extend to the

operation of quarries . . ., whether it be for coal or other minerals . . ., insofar as such laws are applicable thereto." Consequently, the Department was charged with determining which of the laws applied to surface coal mining and surface and underground mineral mining.

A related organizational issue was the Department's authority to promulgate regulations regarding the conduct of the various types of mining. Section 45.1-33 provided that the "Chief shall make, and enforce under applicable mining laws, such rules, regulations or orders as he may deem necessary to secure safe and sanitary conditions in and around such quarries." The Department has promulgated comprehensive safety and health regulation (VR 480-05-1.2) regarding mineral mining based on this authorization. With respect to coal mining, however, the Department issued regulations regarding safety and health only in specific areas, such as the use of diesel powered equipment in underground mines (VR 480-05-9.2) and the use of Automated Temporary Roof Support Systems (VR 480-05-3).

The second area of potential improvement in the Law is its drafting. The enactment of numerous amendments in the Law in the 27 years following its recodification in 1966 has produced internal inconsistencies and errors in internal references. For example, § 45.1-101.2 required the Chief to consult with the Mine Safety Advisory Committee, and § 45.1-101.1 refers to the underground mine safety advisory committee, though both of these committees were eliminated in 1990. Furthermore, changes in mining practices over the period have rendered obsolete many provisions of the law. For example, cardox blasting and compressed air blasting are no longer used, and flame safety lamps are no longer considered suitable for use to detect methane gas in mines.

Accordingly, the Joint Subcommittee agreed that, in addition to any policy changes that may be recommended in the course of the study, it would be appropriate to rewrite portions of the Law to increase its clarity and readability.

The Joint Subcommittee's recommendations with respect to the policy issues addressed during the decision brief process and the technical requirements for types of mining are incorporated in the draft legislation attached as Appendix 19. A set of comparative tables, with cross-references from the proposed legislation as introduced in the 1994 Session of the General Assembly to the Mine Safety Law of 1966, is attached as Appendix 23.

2. Structure of Mine Safety Act

The Joint Subcommittee approved a restructuring of the Law which is intended to enhance its accessibility. To reorganize the law, the first 14 chapters of Title 45.1 (the Virginia Mine Safety Law of 1966) are repealed, and are replaced with eight new chapters.

The first new chapter, Chapter 14.1, addresses administration of the Commonwealth's mining laws generally, and applies to all provisions of Title 45.1. This chapter updates and continues Article 1 of the existing Chapter 1, pertaining to the Department of Mines, Minerals and Energy.

Chapters 14.2 through 14.6 comprise the proposed Mine Safety Act, so named in order to distinguish it from the existing Mine Safety Law of 1966. It encompasses Chapters 1.1 through 9 and Chapter 11 of the 1966 Law.

Chapter 14.7 of the proposed legislation addresses the rights of adjacent owners. It continues, with editorial changes, the existing Chapter 10. Similarly, proposed Chapter 14.8 continues existing Chapter 13. These two chapters, which are continued substantively intact, were not examined by the Joint Subcommittee because, though both are technically parts of the Mine Safety Law of 1966, they do not address mine safety issues.

Finally, Chapter 14 of the 1966 Law (containing transition provisions) is not replicated in the proposed legislation. Several transition provisions relating to the continuation of regulations and other recodification issues are included as uncodified enactment clauses in the legislation as introduced in the 1994 Session.

The proposed Mine Safety Act, as noted above, is composed of five chapters. Chapter 14.2 encompasses provisions dealing with administrative and procedural matters, as well as requirements that apply to more than one of the four types of mines. Chapters 14.3, 14.4, 14.5, and 14.6 contain provisions addressing requirements specifically applicable to underground coal mines, surface coal mines, underground mineral mines, and surface mineral mines, respectively.

Chapter 14.2 consists of 11 articles. Article 1 (General Provisions) contains updated definitions and provisions relating to safety generally. Article 2 addresses the duties of the Chief of the Division of Mines, and the Director of the Department, with respect to coal and mineral mine safety. This article acknowledges the unique status of the Chief, who is appointed by the Governor and is responsible for coal mine safety. With respect to mineral mines, the Director of the Department, rather than the Director of the Division of Mineral Mining, is recognized as having the ultimate authority. Article 2 also addresses the qualifications and duties of mine inspectors.

Articles 3 and 4 of Chapter 14.2 address the certification of miners. Following the Joint Subcommittee's recommendations that separate boards of examiners should be created for coal and mineral mine workers, and that separate requirements to apply to them, clarity dictated splitting the certification issues into separate articles.

Article 5 includes sections pertaining to the licensing of mines, including mine maps. Article 6, pertaining to mine rescue crews and teams, continues the existing Chapter 1.1.

Articles 7, 8, and 9 of Chapter 14.2 deal with mine explosions, accidents and fires, mine inspections, and enforcement issues, respectively. Though various provisions in several articles apply only to specific types of mines, the consensus of the Joint Subcommittee was that it is better to group them in together rather than to break them out for each type of mine, which would produce extensive duplication.

Article 10, pertaining to the Virginia Coal Mine Safety Board, duplicates the existing authorization for the Mine Safety Board. However, the change in the name of the Board reflects the Joint Subcommittee's decision that it should address coal mining issues only, and that a board is not needed for mineral mining. Finally, Article 11 creates a receptacle for provisions addressing miner training. The establishment of this article reflects to members' sentiment that safety training should be given a high profile in Virginia's mine safety programs.

Chapter 14.3 collects the laws applicable specifically to underground coal mining. As directed by the Joint Subcommittee's decision that the coal miner safety laws should be addressed in prescriptive statutes, the chapter sets forth detailed requirements for the operation of an underground coal mine. The Chief is authorized to promulgate regulations which are not inconsistent with the statutory requirements. Specific requirements are contained in 15 articles. With respect to the surface areas at an underground coal mine, the proposed legislation incorporates by reference several provisions of Chapter 14.4, which applies to surface coal mines.

The technical requirements for surface coal mines are contained in Articles 2 through 13 of Chapter 14.4. As with underground coal mines, the requirements are set forth in prescriptive, detailed statutes. The Chief is authorized to promulgate regulations where statutes do not preempt his doing so. The surface coal mining requirements in the proposal legislation are derived from a variety of sources. Some, as with the majority of the standards for underground coal mines, are a continuation of requirements currently mandated in the Mine Safety Law of 1966. Other sources of the technical requirements in this chapter include DMME regulation, the DMME's Surface Foreman Guide, and the Code of Federal Regulations.

Chapters 14.5 and 14.6 address requirements applicable to underground mineral mines and surface mineral mines, respectively. Unlike the chapters addressing coal mines, these two chapters do not contain voluminous technical standards. Instead, most of the requirements are to be set forth in regulations promulgated by the Department. The existing regulations for mineral mining, last amended comprehensively in 1989, will continue in effect to the extent not inconsistent with

the proposed laws. Due to the fact that a few of the statutes currently applicable to mineral mines are not duplicated in regulation, the Joint Subcommittee has included specific statutory requirements. Those requirements which are deemed to be procedural, such as mining in proximity to gas and oil wells, are to remain in statute, while those deemed to be technical will be superseded by Department regulations once promulgated.

At their final meeting, the members unanimously endorsed the proposed Mine Safety Act as reflecting the recommendations of the Joint Subcommittee. The participants in the process all acknowledged that, while no group or interest could claim victory on every issue, the compromises reached are acceptable to everyone and, most importantly, have improved the Commonwealth's mine safety laws.

VI. CONCLUSION

The members of the Joint Subcommittee have produced a comprehensive rewriting of Virginia's mine safety laws. Each member hopes that the efforts of the study will enforce the safety of persons employed in mines while promoting the efficiency of mining operations. The sense of the participants echoes the closing comments made 40 years ago in the final report of the Commission on Mine Safety, which conducted the last comprehensive rewriting of this body of law:

> In conclusion the Commission desires to emphasize that the basic philosophy underlying this report is that the mining laws of Virginia should be devoted to the primary end of mine safety; and at the same time that they should avoid undue restrictions upon the mine's operator which will interfere with profitable operation of the mine, The law should be flexible and should be capable of meeting changing conditions as they arise.
>
> Report of the Commission on Mine Safety (House Document 8, Commonwealth of Virginia, September 1, 1953)

The legislation proposed by the Joint Subcommittee was introduced in the 1994 Session of the General Assembly as Senate Bill 200. Senator Reasor was the chief patron of the measure. A duplicate bill was introduced by Delegate Stump as House Bill 1372. Senate Bill 200 was passed by the Senate and the House of Delegates without substantive change. Governor Allen signed the legislation into

law on March 7, 1994, as Chapter 28 of the 1994 Acts of Assembly. The legislation will become effective on July 1, 1994.

The Joint Subcommittee wishes to express its appreciation for the contributions made by the personnel of the Department of Mines, Mineral and Energy, with special recognition to Kathy Reynolds. Members are also appreciative of the materials and testimony contributed by the other groups and individuals who participated in the study. Their efforts greatly assisted the members in analyzing and evaluating issues addressed by the study.

Respectfully submitted,

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* Mr. Lowe dissents only with respect to the provision of subsection A of § 45.1-161.90 stating that a notice of violation shall be issued to the person who is responsible for the violation. This may deter reporting of violations in instances where a miner believes that he may be held liable for a violation if he reports it.

Appendix 1

GENERAL ASSEMBLY OF VIRGINIA–1993 SESSION

HOUSE JOINT RESOLUTION NO. 645

Establishing a joint subcommittee to study the Virginia Mine Safety Law of 1966.

Agreed to by the House of Delegates, February 9, 1993
Agreed to by the Senate, February 16, 1993

WHEREAS, the General Assembly passed the first coal mine safety law in Virginia in 1912; and

WHEREAS, the mine safety laws have required periodic review and modification to reflect changes in Virginia's mining industry, including passage of a modern mine safety law in Virginia in 1940, adding requirements for mine licensing in 1959, and adding protection of miners working in mineral mines under the Virginia Mine Safety Law of 1966; and

WHEREAS, the United States Congress subsequently passed the Federal Coal Mine Health and Safety Act of 1969 and the Federal Mine Safety and Health Act of 1977; and

WHEREAS, the Governor's Advisory Committee on Mine Safety in Virginia, also known as the Governor's Blue Ribbon Panel, examined issues of safety in Virginia's coal mines after the June 21, 1983, explosion at the McClure Mine No. 1 in Dickenson County which resulted in the death of seven miners; and

WHEREAS, the number of coal mine fatalities has been decreasing from an average of 15 fatalities per year for the five-year period from 1980 through 1984 to an average of eight fatalities per year for the five-year period from 1988 through 1992; and

WHEREAS, the number of mineral mine fatalities has remained at an average of one fatality per year from 1980 through 1992; and

WHEREAS, in spite of the substantial improvements in mine safety, the December, 1992, explosion at the Southmountain Mine in Wise County, which resulted in the death of eight coal miners, and accidents at the W. S. Frey Company limestone quarry in Frederick County, which resulted in the deaths of two mineral miners, illustrate the continuing dangers faced by Virginia's miners and the necessity for effective mine safety laws and programs; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That a joint subcommittee be established to study the need for modifications to the Virginia Mine Safety Law of 1966.

The joint subcommittee shall consist of 13 members to be appointed as follows: five members from the House of Delegates to be appointed by the Speaker of the House; four members from the Senate to be appointed by the Senate Committee on Privileges and Elections; and four citizens to be appointed by the Governor as follows: one representative of coal mine workers, one representative of mineral mine workers, one representative of coal mine operators, and one representative of mineral mine operators.

The Department of Mines, Minerals and Energy shall provide assistance upon request of the joint subcommittee.

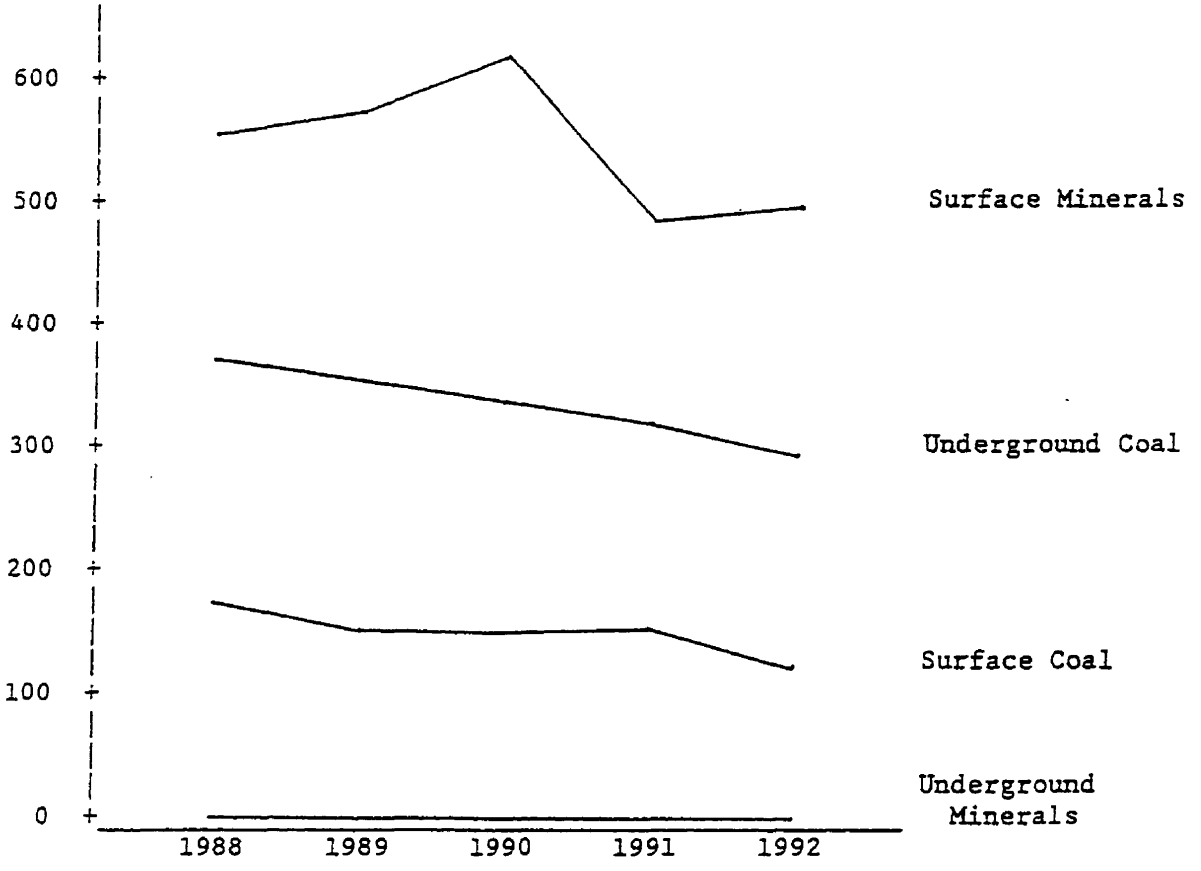
The joint subcommittee shall complete its work in time to submit its findings to the Governor and the 1994 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

The indirect costs of this study are estimated to be $13,675; the direct costs of this study shall not exceed $9,900.

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 the conduct of the study.

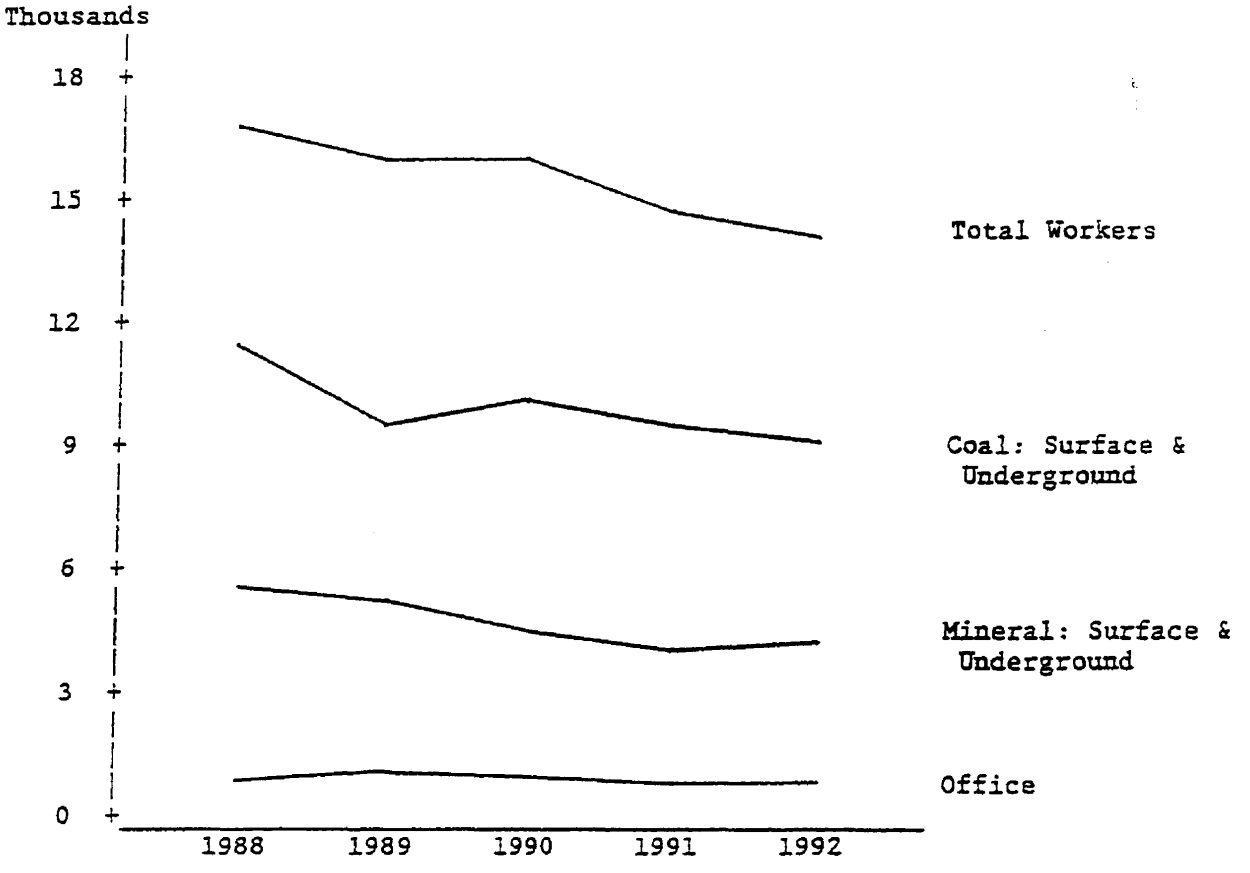
Appendix 2

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
NUMBER OF MINES
JUNE 1993



YEAR	SURFACE COAL	UNDERGROUND COAL	SURFACE MINERALS	UNDERGROUND MINERALS	TOTAL
1988	172	373	558	3	1,106
1989	152	356	575	3	1,086
1990	150	340	626	3	1,119
1991	155	327	489	3	974
1992	127	297	497	4	925

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
NUMBER OF MINE WORKERS
JUNE 1993

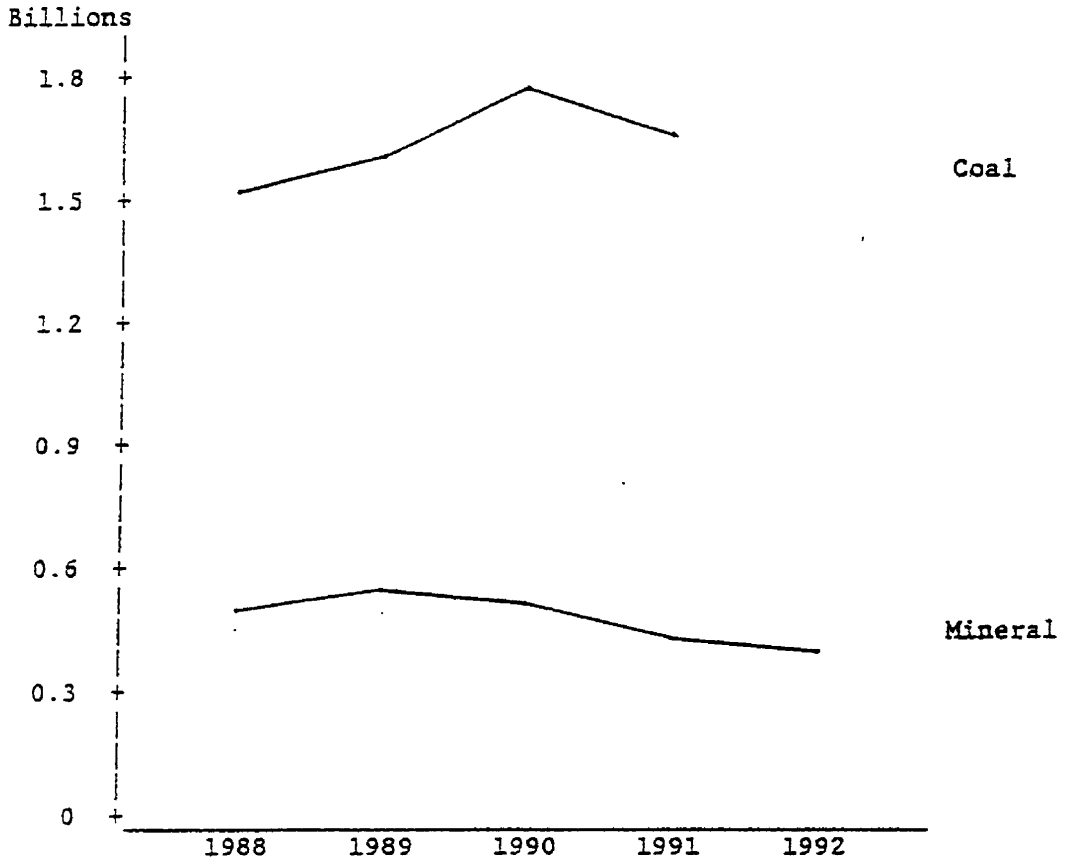


YEAR	SURFACE COAL	UNDERGROUND COAL	QUARRY MINERAL	PLANT MINERAL	OFFICE	TOTAL
1988	1,795	9,311	2,073	3,126	1,228	17,628
1989	1,386	8,523	2,073	2,743	1,328	16,056
1990	1,517	8,748	1,961	2,446	1,217	15,889
1991	1,615	8,141	1,647	2,286	1,159	14,848
1992	1,329	7,680	1,734	2,311	1,061	14,115

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
PRODUCTION: SHORT TONS
JUNE 1993

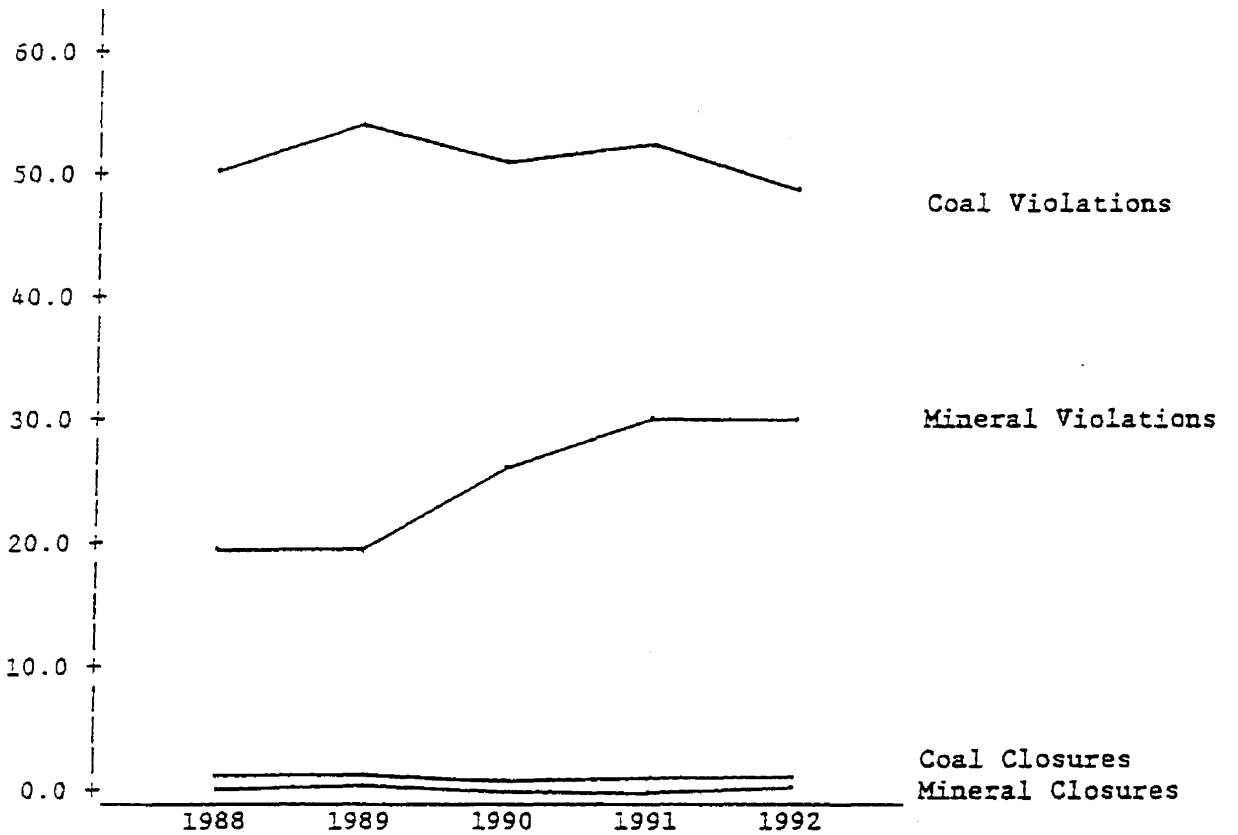
YEAR	SURFACE COAL	UNDERGROUND COAL	TOTAL COAL	TOTAL MINERALS
1988	7,942,639	38,422,008	46,364,647	93,784,611
1989	6,963,145	36,892,085	43,855,231	89,805,245
1990	7,782,212	38,854,496	46,636,708	95,304,541
1991	8,087,367	34,248,769	42,336,136	70,835,129
1992	8,174,321	34,389,198	42,536,520	70,591,827

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
VALUE OF SALES
JUNE 1993



YEAR	VALUE COAL SALES	VALUE MINERAL SALES
1988	$ 1,576,398,000	$ 506,153,000
1989	1,622,644,000	520,083,000
1990	1,792,579,000	507,275,000
1991	1,632,058,000	428,045,000
1992	Not yet available	415,962,000 (preliminary)

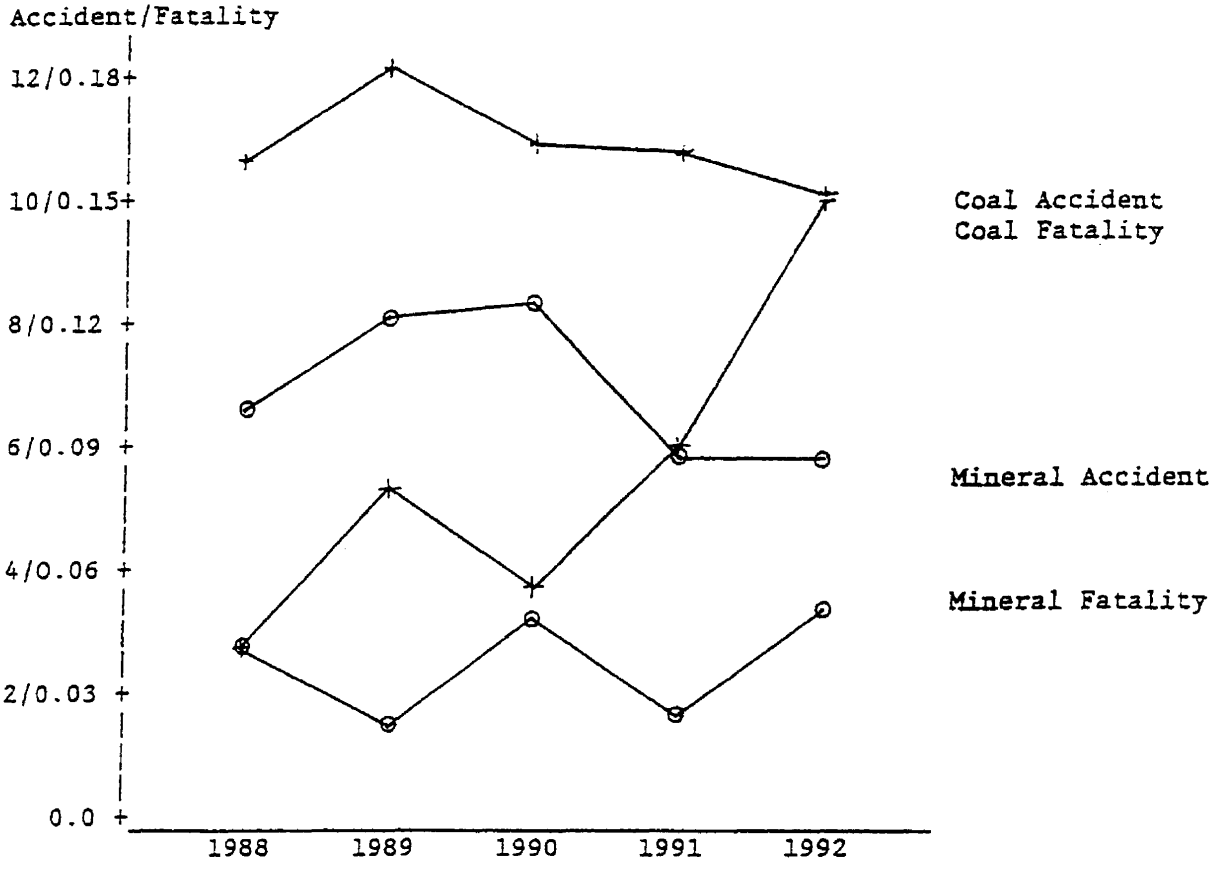
VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
VIOLATIONS AND CLOSURE ORDERS FREQUENCY RATE
JUNE 1993



Data show rate of violations or closures per 200,000 production work hours

YEAR	COAL VIOLATIONS	COAL CLOSURES	MINERAL VIOLATIONS	MINERAL CLOSURES
1988	50.17	2.04	19.26	0.52
1989	58.09	1.93	19.11	0.74
1990	52.54	1.81	26.12	0.44
1991	54.73	2.31	30.22	0.51
1992	47.77	2.46	30.87	0.95

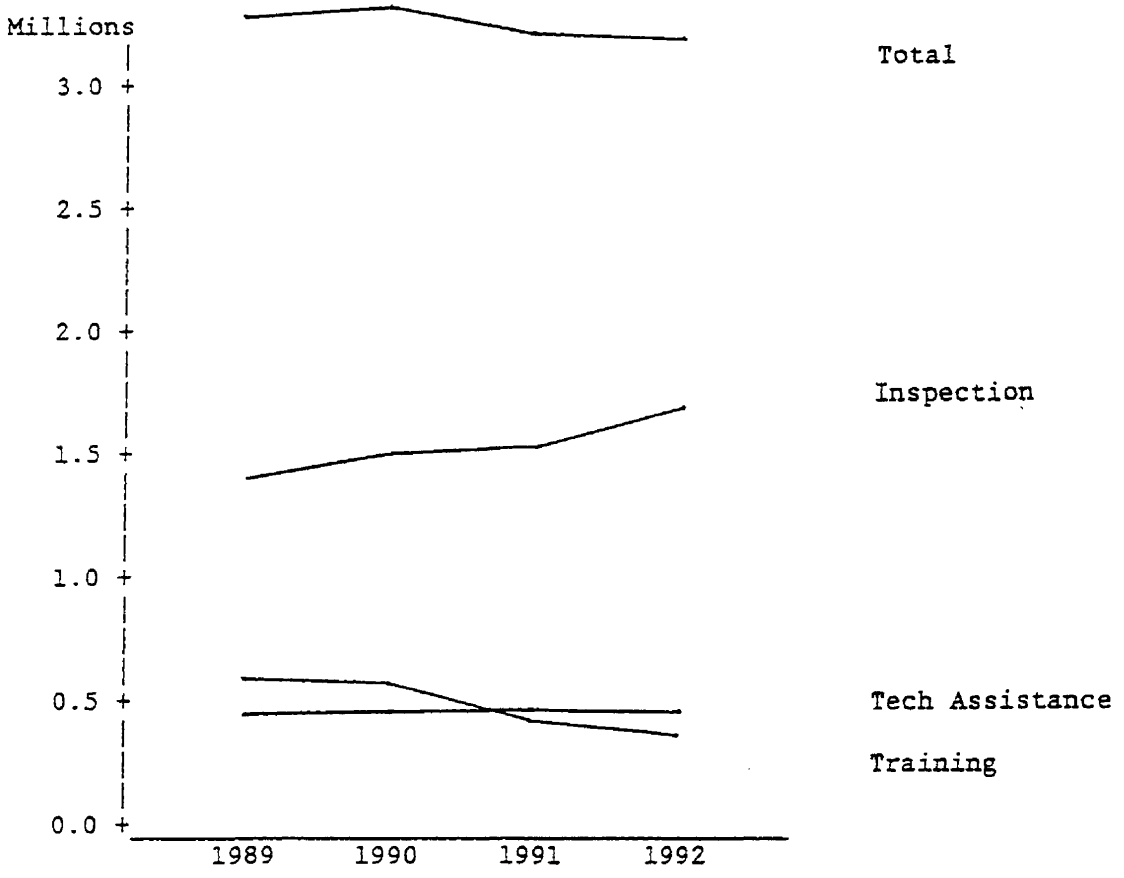
VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
ACCIDENT AND FATALITY FREQUENCY RATES
JUNE 1993



Data show accident and fatality rate per 200,000 production hours

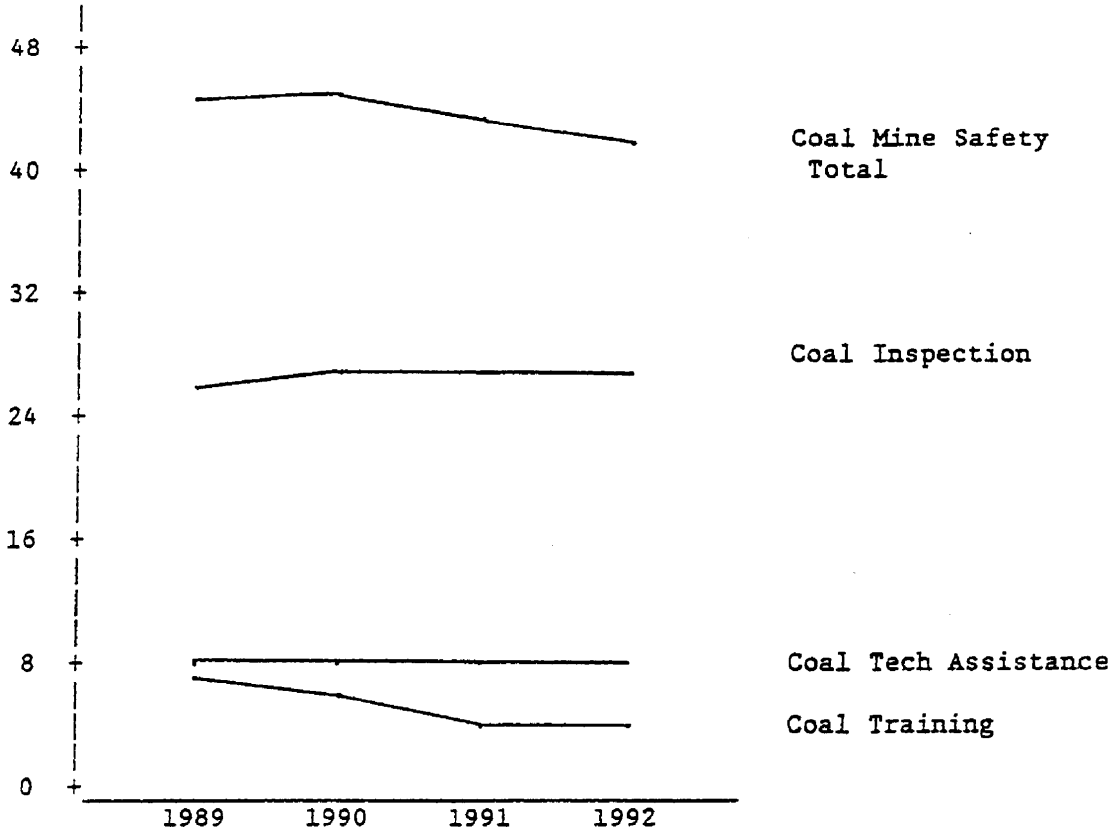
YEAR	COAL ACCIDENT	COAL FATALITY	MINERAL ACCIDENT	MINERAL FATALITY
1988	10.71	0.041	6.81	0.042
1989	12.15	0.080	8.19	0.023
1990	11.41	0.056	8.32	0.049
1991	10.82	0.090	5.84	0.027
1992	10.07	0.150	5.84	0.053

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
DMME COAL MINE SAFETY PROGRAM BUDGET
JUNE 1993



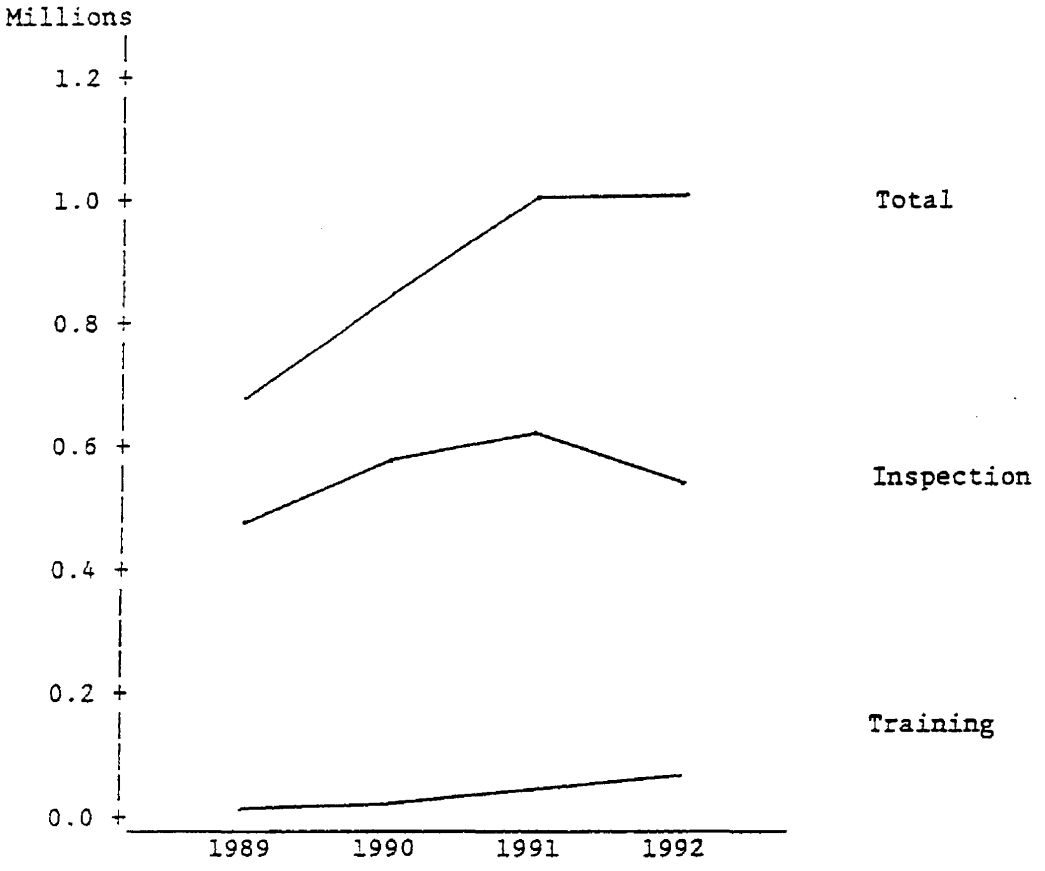
YEAR	COAL INSPECT	COAL TRAINING	COAL TECH ASST	COAL TOTAL
1989	1,406,968	666,432	415,316	3,258,938
1990	1,516,309	568,360	439,303	3,281,900
1991	1,538,414	389,972	458,551	3,228,477
1992	1,731,164	279,043	463,091	3,186,660

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
DMME COAL MINE SAFETY PROGRAM EMPLOYEES
JUNE 1993



YEAR	COAL INSPECT	COAL TRAINING	COAL TECH ASST	COAL TOTAL
1989	26	7	8	45
1990	27	6	8	45
1991	27	4	8	43
1992	27	4	8	42

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
DMME MINERAL MINE SAFETY PROGRAM BUDGET
JUNE 1993



YEAR	MINERAL INSPECT	MINERAL TRAIN	MINERAL TOTAL
1989	$ 474,409	$ 9,987	$ 689,515
1990	590,427	34,595	866,432
1991	634,836	63,766	1,031,371
1992	540,279	74,534	1,037,254

Note: These data are prorated from the Division of Mineral Mining final annual allotments at 65% safety and 35% reclamation, based on percentage of inspection time spent on safety and reclamation issues.

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
VIRGINIA'S MINING INDUSTRY
DMME MINERAL MINE SAFETY PROGRAM EMPLOYEES
JUNE 1993

YEAR	MINERAL INSPECT	MINERAL TRAINING	MINERAL TOTAL
1989	9	0	10
1990	11	1.5	14
1991	10	1.5	13
1992	10	1.5	13

Note: These data are prorated from Division of Mineral Mining personnel at 65% safety and 35% reclamation, based on percentage of inspection time spent on safety and reclamation.

MINE SAFETY LAW COMPARISON
Prepared by: VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY
JULY 1993

SUBJECT	VA	MSHA	KY	WV	AL[3]	OH	IL	PA[3]
Combined standards for underground and surface operations	X	X	X			X	X	
Separate standards for underground and surface operations				X	X			X
Combined standards for coal and mineral mining	X	X	X	X		X		
Separate standards for coal and mineral mining					X		X	X[2]
Generally safety standards only	X		X	X	X	X	X	
Generally safety and health standards		X						X
General hierarchical relationship of the Code and regulatory programs								
Prescriptive standards in law					X	X		
Prescriptive standards in law and regulations	X		X	X			X	X
Performance standards in law, prescriptive standards in regulations		X[1]						
Enabling provisions in law, performance standards in regulations, prescriptive standards in mine plans								

Appendix 3

SUBJECT	VA	MSHA	KY	WV	AL	OH	IL	PA
Enforcement								
Operator liability	X	X	X	X	X	X	X	X
Individual liability	X	X	X	X	X	X	X	X
Criminal actions and penalties	X	X	X	X	X	X	X	X
Civil actions and penalties		X	X	X	X			
Administratively determined		X	X	X				
Judicially determined	X	X	X	X	X	X	X	X
Administrative appeals of civil penalties		X	X	X	X			
Administrative appeals of enforcement actions		X	X	X	X	X	X	X
Special certifications								
Certifications and qualifications	X		X[4]	X[4]	X	X	X[4]	X[4]
Set by statute	X		X	X	X	X	X	X
Set by administrative body	X		X	X				
Reciprocity	X		X			X	X	
Terms of certifications and approvals								
Time								
Renewals								
Continuing education			X					
Re-testing								
Revocation standards	X		X	X	X	X	X[5]	X

SUBJECT	VA	MSHA	KY	WV	AL	OH	IL	PA
Safety								
Definition of mine: covered facilities								
Mines								
Underground	X	X	X	X	X	X	X	X
Gassy/Nongassy Distinction		X				X	X[5]	X
Surface at underground	X		X		X	X	X	X
Surface	X	X	X	X	X	X	X	
Auger	X	X	X	X	X	X	X[5]	X[6]
Highwall	X	X	X	X	X	X	X[5]	
Tipples	X	X	X	X	X	X	X	X
Prep plants and processing plants	X	X	X	X	X	X	X	X
Shops	X	X	X	X	X	X	X	X
Offices	X	X	X	X	X	X	X	X
Covered activities								
License required to operate a mine	X		X	X				
Fee required	X		X	X				
Term of license renewal	X		X	X				
Ventilation								
Methane	X	X	X	X	X	X	X[5]	X
Oxygen	X	X	X	X	X	X	X	X
Noxious gases	X	X	X	X	X	X	X	X
Electrical	X	X	X	X	X	X	X	X

SUBJECT	VA	MSHA	KY	WV	AL	OH	IL	PA
Transportation								
Travelways and escapeways	X	X	X	X	X	X	X	X
Mantrips	X	X	X	X	X	X	X[5]	X
Hoisting	X	X	X	X	X	X	X	X
Materials, supplies, and equipment transport	X	X	X	X		X	X	X
Other mobile equipment	X	X	X	X	X	X	X[5]	X
Certain actions limited to performance by certified and qualified persons	X	X	X	X	X	X	X	X
Vertical ventilation holes and gas wells	X	X	X	X			X[5]	
Mechanical and electrical equipment								
Permissibility	X	X	X	X	X	X	X[5]	X
Safety standards	X	X	X	X	X	X	X	
Diesel equipment								
Permissibility	X[7]		X	X	X		X[5]	
Safety standards	X[7]				X		X[5]	
Roof, rib, and face control/ground control	X	X	X	X	X	X	X	X
Blasting and explosives								
Storage	X	X	X	X	X	X	X	X
Use	X	X	X	X	X	X	X	X
Standards for off-site effects	X		X	X	X			
Surface conditions								
Safety standards	X	X	X	X	X		X	X
Impoundments	X	X						X
Public access to sites			X		X	X		
Communications	X	X		X		X	X	X

SUBJECT	VA	MSHA	KY	WV	AL	OH	IL	PA
Fire prevention and control								
Combustible materials	X	X	X	X	X	X	X	X
Rock dusting	X	X	X	X	X	X	X[5]	X
Drilling	X		X	X	X		X[5]	
Bulk material loading, handling, and dumping							X[5]	
Compressed air, pressure vessels, and boilers	X			X	X	X	X	
Illumination	X	X	X	X	X	X	X	X
Personal protection	X	X	X	X	X	X		X
Maps	X	X	X	X	X	X	X	X
Shafts and Slope sinking				X		X	X	X
Building and other construction		X	X	X		X	X	X
Accident reporting	X	X	X	X	X	X	X	X
Recordkeeping								
Government	X	X	X	X	X	X	X	X
Industry	X	X	X	X	X	X	X	X
Mine Rescue								
Government employed crews	X		X	X	X	X	X[5]	X
Government certified private crews	X							
Fees	X							

SUBJECT	VA	MSHA	KY	WV	AL	OH	IL	PA
Health								
Atmosphere								
Dust	X	X		X		X		X
Airborne contaminants		X			X			X
Respiratory equipment		X			X			X
Sampling		X						
Noise	X	X						
Hazardous materials		X						
Hazardous communication standards		X						
Occupational injuries (does not include workers' compensation)								
Trauma (first-aid)	X	X	X	X	X	X	X	X
Non-traumatic (long-term)		X						
Bath house, washing, and toilet facilities		X			X	X	X	X
Drinking water		X			X	X	X	X

FOOTNOTES
LAW COMPARISON

1 *Interim prescriptive standards for underground mines were set by statute, effective only until regulations were developed.*

2 *Also separate laws for bituminous and anthracite coal mining. No safety law for surface coal mining.*

3 *Coal only shown. Separate laws govern mineral mining.*

4 *State law establishes certifications for miners; the table includes only specialized certifications.*

5 *Applies only to coal mining.*

6 *Provisions regarding auger mining are currently not enforced.*

7 *Specific standards set by regulation under general authority to promulgate regulations governing safety and health.*

MINE SAFETY PROGRAM COMPARISON (Revised July 1993)

MINE SAFETY PROGRAM COMPARISON

SUBJECT	VA		MSHA		KY		WV		AL		GE		IL		PA[22]	
	Coal	Min	Coal	Mix	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min
Certain minerals exempt	Unconsolidated/Dirt			No	All but clay[6]			No	Marble, limestone, granite, some chert[13]			No		No		No
Government-run mines exempt	Yes	Yes	No	No	No	No	Don't Know	Don't Know	Yes[14]	Yes[14]	No	No	No	No	Don't Know	Don't Know
Inspections																
All regulated sites	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Frequency	3 Mos. UG 6 Mos. SRF	3 Mos. UG 6 Mos. SRF	3 Mos. UG 6 Mos. SRF	3 Mos. UG 6 Mos. SRF	6 Mos. UG[7] 6 Mos. SRF (Minimum)	6 Mos. UG[7] 6 Mos. SRF (Minimum)	3 Mos. UG 6 Mos. SRF	6 Mos. UG 6 Mos. SRF	45 Days UG 2 Mos. SRF	3 Mos.	3 Mos. UG 3 Mos. SRF	3 Mos. UG 3 Mos. SRF	At Least Monthly	At Least Every 3 Mos.	3 Mos.[23]	3 Mos.[24]
Spot inspections made	Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No
Prep and processing plants—on-site, off-site or both	On-site	On-site	Both	Both	On-site[8]	On-site[8]	Both	Both	On-site	On-site	Both	Both	Probably Both	Probably Both	Both	Both
Included w/assistance visits																
Regular violations	No	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Informally	Informally	Informally	Informally	Yes	Yes
Imminent danger violations	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Complaints																
Standards regarding investigations	Yes - ASAP	Yes - ASAP	Yes - ASAP	Yes - ASAP	Yes - ASAP	Yes - ASAP	Yes - ASAP[11]	Yes - ASAP[11]	No Depends on Situation	No Depends on Situation	Yes - ASAP	Yes - ASAP	Yes - ASAP[17]	Yes - ASAP[17]	Yes - ASAP	Yes - ASAP
Confidentiality guaranteed	No	No	Yes	Yes	No[9]	No[9]	Yes	Yes	Yes	Yes	Yes	Yes	Yes[18]	Yes[18]	Yes	Yes

Appendix 4

MINE SAFETY PROGRAM COMPARISON

MINE SAFETY PROGRAM COMPARISON

SUBJECT	VA		MSHA		KY		WV		AL		OH		IL		PA[22]	
	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min
Types of enforcement actions																
Criminal, civil or both	Criminal	Criminal	Both	Both	Both	Both	Both	Both	Criminal	N/A[15]	Criminal	Criminal	Criminal	Criminal	Criminal	Criminal
Individual, operator or both	Both[16]	Both[16]	Both	Both	Both	Both	Both	Both	Both	N/A[15]	Both[16]	Both[16]	Both	Both	Both	Both
Contractor	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No
Technical assistance																
Ventilation	Yes	No	Yes[1]	Yes[1]	Yes	Yes[10]	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Roof Control	Yes	No	Yes[1]	Yes[1]	Yes	Yes[10]	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Electrical	Yes	No	Yes[1]	Yes[1]	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Other	---	---	---	---	---	---	---	---	---	---	Anything safety-related		Any type of needed assistance		Any type of engineering assistance	
Training																
Certification	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes - When Requested	No	No
Job performance/skills	No	No	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No
Safety	During insp.	Yes and During insp.	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
On-site	No	No	No	No	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes
Classroom/centralized	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes

MINE SAFETY PROGRAM COMPARISON

SUBJECT	VA		MSHA		KY		WV		AL		OH		IL		PA[22]	
	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min
Training Continued:																
Required	No	No	Yes[2]	Yes[2]	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes[19]	Yes[19]	No	No
Optional	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes
New Miners	No	No	No	No	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes[20]	Yes[20]	No	No
Continuing education	No	No	No	No	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes[21]	Yes[21]	Yes	Yes
On-site job safety analysis (if yes, which mines)	Yes - certain small mines	No	Yes[3]	No	Yes Mandatory for UG	Yes	Yes Informally restricted to small mines	Yes	No	No	Yes (Less than 30 employees)	Yes	Yes Targeted where needed or on request	Yes	Yes Anyone who requests it	Yes
Testing and issuance of certifications																
Administered by indep. board	No	No	No	N/A	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No
Administered by agency	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes
Equipment testing & evaluation	No	No	Yes	Yes	No	No	No	No	No	No	Yes	Yes	Yes	Yes	No	No
Equipment approval	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	Yes	Yes
Accidents, injuries and illnesses																
Defined (threshold)	Yes	Yes	No[4]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reporting (which accidents and how often)	Serious & Fatal ASAP	Serious & Fatal ASAP	Serious ASAP, Non-serious 5 working days	All ASAP[5]	Serious/ lost-time ASAP	Serious/ lost-time ASAP	Serious[12] ASAP	Serious[12] ASAP	Life-threatening ASAP	Life-threatening ASAP	Serious/ lost-time ASAP	Serious/ lost-time ASAP	Serious ASAP, others monthly	Serious ASAP, others monthly	Serious & unusual events ASAP[25]	Serious & unusual events ASAP[25]

MINE SAFETY PROGRAM COMPARISON

SUBJECT	VA		MSHA		KY		WV		AL		OH		IL		PA	
	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min	Coal	Min
Investigation (if yes, which accidents)	Yes-Serious & Fatal	Yes-Serious & Fatal	Yes-Serious & Sometimes Others	Yes-MSHA Discretion	Yes-Serious	Yes-Serious	Yes All serious and some occupational injuries	Yes	Yes, Life-Threatening & Some Other Serious	Yes, Life-Threatening & Some Other Serious	Yes-Serious/ Lost-time	Yes-Serious/ Lost-time	Yes-Serious	Yes-Serious	Yes-Serious or Potentially Serious	Yes-Serious Potentially Serious
Tracking rates and causes	Yes-Informally	Yes-Informally	Yes	Yes	Yes	Yes	Yes	Yes	Not much	Not much	Not to a great degree	Not to a great degree	Yes	Yes	In process of trying to do this	
Data used for targeted action	Yes-Informally	Yes-Informally	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Not much	Yes (Use MSHA Data)	Yes	Yes	Yes	In process of trying to do this	
Use of boards																
Regulatory (Operations)	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No
Regulatory (Certifications)	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Policy	No	No	No	No	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No
Advisory	Yes	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	Yes	No
Membership representation (which groups)	Operator, Labor, State Citizen		Operator, Labor		Operator, Labor, State		Labor, Operator, State, Citizen		Labor, Operator, State		Labor, Operator, State		Labor, Operator, State		Labor, Operator, MSHA Bureau of Mines, State Academia	
Relationships of federal, state, operator and mine: actions																
Overlapping areas	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Areas of independent actions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (a little)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Areas of cooperative actions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

FOOTNOTES

[1] *Minimal technical assistance provided.*

[2] *Operators required to provide training.*

[3] *Job safety analysis information provided to operators of mines with less than 50 employees that are over national NFDL rates and that have poor compliance records.*

[4] *Written reports are filed for all injuries; oral reports are made for serious injuries.*

[5] *MSHA is notified of all accidents as soon as possible; reports of all accidents, injuries and illnesses are required within 10 days.*

[6] *Regulates blasting and explosives and provides training for all mineral mining.*

[7] *By law, inspections are performed at least every 6 months; in practice, about 4/year are performed.*

[8] *Preparation and processing plants that are off-site but linked directly to mine operations or that are under contract to mine operators are inspected.*

[9] *Anonymous complaints are investigated; if the complaint is not anonymous, then cannot guarantee confidentiality.*

[10] *Currently no underground clay mines.*

[11] *Complaints are investigated as soon as possible in most cases, and within a few days if there is no immediate need to investigate.*

[12] *Serious accidents must be reported as soon as possible and followed up with a written report within 24 hours; occupational injuries must be reported within 10 days.*

[13] *Exempt from permitting and bonding, but most mines are still inspected.*

[14] *Probably exempt from permitting and inspections, but not health and safety laws.*

[15] *Probably could take criminal enforcement action in certain situations.*

[16] *Enforcement action may be taken against an individual, but this is not usually done.*

[17] *Depends on complaint; inspectors have a lot of discretion.*

[18]*There is no confidentiality if formal charges are made.*

[19]*Required whenever inspector feels training is necessary.*

[20]*Only first aid and mine rescue training.*

[21]*Certification and accident prevention training as needed.*

[22]*Only program related to underground mining included in table.*

[23]*Anthracite coal mines inspected every 2 months.*

[24]*Electrical inspections made every six months.*

[25]*Lost-time accidents reported at end of month.*

UG	*Underground*
SRF	*Surface*
N/A	*Not Applicable*
ASAP	*As Soon As Possible*

Appendix 5

MINERAL VIOLATIONS

LAW SECTION	1988	1989	1990	1991	1992
EQUIP GUARDING 45.1-88	34%	28%	24%	23%	24%
WALKWAYS 45.1-36	19	15	14	17	17
MOBILE EQUIP REG PART 9	16	18	17	16	16
ELECTRICITY 45.1-75 TO 83	12	10	12	12	13
FIRE PREVENTION 45.1-89	8	8	13	8	6
GENERAL SAFETY REG PART 2	3	7	7	12	11
MATERIAL HANDLG REG PART 13	3	0	0	0	0
PERSONAL PROTECT 45.1-99 & 101	2	4	2	2	3
BLASTING 45.1-44 TO 51	2	6	1	3	3
GROUND CONTROL REG PART 3	1	1	1	1	1
% TOTAL	98%	97%	93%	94%	94%
SUB-TOTALS	1322	1024	1111	1024	1013
TOTALS	1346	1054	1193	1087	1076

TABLE 1

MINERAL VIOLATIONS

LAW SECTION	1988	1989	1990	1991	1992
EQUIP GUARDING 45.1-88	34%	28%	24%	23%	24%
WALKWAYS 45.1-36	19	15	14	17	17
MOBILE EQUIP REG PART 9	16	18	17	16	16
ELECTRICITY 45.1-75 TO 83	12	10	12	12	13
FIRE PREVENTION 45.1-89	8	8	13	8	6
GENERAL SAFETY REG PART 2	3	7	7	12	11
MATERIAL HANDLG REG PART 13	3	0	0	0	0
PERSONAL PROTECT 45.1-99 & 101	2	4	2	2	3
BLASTING 45.1-44 TO 51	2	6	1	3	3
GROUND CONTROL REG PART 3	1	1	1	1	1
ADDED SECTIONS					
PRESSURE VESSELS REG PART 8		1	6	5	4
GENERAL & ADMIN 45.1-5 TO 26					1
% TOTAL	98%	98%	99%	99%	99%
SUB-TOTALS	1322	1035	1181	1076	1066
TOTALS	1346	1054	1193	1087	1076

TABLE 2

MINERAL MINING CLOSURE ORDERS

LAW SECTION	1988	1989	1990	1991	1992
GROUND CONTROL REG PART 3	42%	20%	32%	41%	22%
MOBILE EQUIPMENT REG PART 9	13	15	27	36	30
EXPLOSIVES REG PART 6	13	32	5	5	8
NO MINE LICENSE 45.1-25	8	12	5	5	5
WALKWAYS 45.1-36	4	2	9	5	8
% TOTAL	80%	81%	78%	92%	73%
SUB-TOTALS	19	33	17	20	27
TOTALS	24	41	22	22	37

TABLE 3

MINERAL MINING CLOSURE ORDERS

LAW SECTION	1988	1989	1990	1991	1992
GROUND CONTROL REG PART 3	42%	20%	32%	41%	22%
MOBILE EQUIPMENT REG PART 9	13	15	27	36	30
EXPLOSIVES REG PART 6	13	32	5	5	8
NO MINE LICENSE 45.1-25	8	12	5	5	5
WALKWAYS 45.1-36	4	2	9	5	8
ADDED SECTIONS					
ELECTRICITY 45.1-75 to 83	4	2	9	0	3
SECURE ACCIDENT SCENE 45.1-21 (c)	4	0	0	0	5
PERSONAL PROTECT 45.1-99 & 101	4	0	0	0	3
% TOTAL	92%	83%	87%	92%	84%
SUB-TOTALS	22	34	19	20	31
TOTALS	24	41	22	22	37

TABLE 4

MINERAL ACCIDENT & FATALITY ANALYSIS

MINERAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(100% OF ACCIDENTS AND FATALITIES IN SAMPLE)

	1988	1989	1990	1991	1992	TOTAL
% RELATED TO MINE CONDITIONS	25%	46%	46%	20%	27%	35%
% RELATED TO MINE PRACTICES	75	54	54	80	73	65

TABLE 5

MINERAL ACCIDENT & FATALITY ANALYSIS

MINERAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(100% SAMPLE)

	1988	1989	1990	1991	1992	TOTAL
% WITH CAUSE ADDRESSED BY LAW	50%	62%	85%	70%	91%	75%

	1988	1989	1990	1991	1992	TOTAL
% RELATED TO MINE CONDITIONS ADDRESSED BY LAW	44%	50%	38%	67%	85%	34%
% RELATED TO MINE PRACTICES ADDRESSED BY LAW	56	50	62	33	15	66

MINERAL ACCIDENT & FATALITY ANALYSIS

MINERAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(100% SAMPLE)
CAUSE ADDRESSED BY LAW

CAUSE	1988	1989	1990	1991	1992	TOTAL
% MOBILE EQUIPT	22%	17%	0%	17%	15%	13%
% TRAVELWAYS	22	33	31	0	0	17
% ELECTRICITY	0	33	15	33	8	15
% PERSONAL PROTC	11	0	15	0	23	13
% OTHER	45	17	39	50	54	42

MINERAL ACCIDENT & FATALITY ANALYSIS

MINERAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(100% SAMPLE)

	1988	1989	1990	1991	1992	TOTAL
% WITH CAUSE NOT ADDRESSED BY LAW	50%	38%	15%	30%	9%	25%

	1988	1989	1990	1991	1992	TOTAL
% RELATED TO MINE CONDITIONS NOT ADDRESSED BY LAW	50%	39%	100%	33%	0%	46%
% RELATED TO MINE PRACTICES NOT ADDRESSED BY LAW	50	61	0	66	100	54

MINERAL ACCIDENT & FATALITY ANALYSIS

MINERAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(100% SAMPLE)
CAUSE NOT ADDRESSED BY LAW

CAUSE	1988 - 1992
% INADEQUATE TASK & HAZARD TRAINING	37%
% MOBILE EQUIPMENT	25
% IMPROPER WORK PRACTICES	13
% PERSONAL PROTECTION	8
% OTHER	17

COAL VIOLATIONS

LAW SECTION	1988	1989	1990	1991	1992
CLEAN UP & ROCK DUST 45.1-66 (a) 45.1-67 (a) 45.1-67 (c)	19%	18%	15%	14%	14%
ELECTRICAL 45.1-80 (e) 45.1-83 (b) 45.1-85 A	13	13	14	13	13
HAULAGE 45.1-72 (a) 45.1-73 (b)	9	10	11	11	12
FIRE FIGHTG EQUIP 45.1-89 (a)	8	8	8	9	8
ROOF CONTROL 45.1-40 (a)	6	7	8	8	6
% TOTAL	55%	56%	56%	55%	53%
SUB-TOTALS	2794	2948	2707	2624	2103
TOTALS	5120	5243	4844	4838	4009

TABLE 1

COAL VIOLATIONS

LAW SECTION	1988	1989	1990	1991	1992
CLEAN UP & ROCK DUST 45.1-66 (a) 45.1-67 (a) 45.1-67 (c)	19%	18%	15%	14%	14%
ELECTRICAL 45.1-80 (e) 45.1-83 (b) 45.1-85 A	13	13	14	13	13
HAULAGE 45.1-72 (a) 45.1-73 (b)	9	10	11	11	12
FIRE FIGHTG EQUIP 45.1-89 A	8	8	8	9	8
ROOF CONTROL 45.1-40 (a)	6	7	8	8	6
ADDED SECTIONS					
ELECTRICAL SWITCHES 45.1-80 (d)					5
% TOTAL	55%	55%	56%	55%	58%
SUB-TOTALS	2794	2948	2707	2624	2417
TOTALS	5120	5243	4844	4838	4009

TABLE 2

COAL CLOSURE ORDERS

45.1-5 G Top Ten Section Law References:

LAW SECTION	1988	1989	1990	1991	1992
HAULAGE 45.1-72 (a) 45.1-90 (b)	22%	19%	17%	18%	12%
ROOF CONTROL 45.1-40 (a) 45.1-41 E 45.1-41 F	10	13	16	12	14
ELECTRICAL 45.1-80 (a) 45.1-80 (d) 45.1-83 (b)	10	14	18	19	25
EMT 45.1-101.1	5	4	5	4	1
ROCK DUST 45.1-67 (a)	3	0	0	0	0
VENTILATION 45.1-56 (a) 45.1-58 (e)	2	2	1	0	1
% TOTAL	53%	52%	57%	53%	53%
SUB-TOTALS	102	91	91	110	113
TOTALS	200	174	167	206	208

TABLE 3

COAL ACCIDENT & FATALITY ANALYSIS

COAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(25% OF ACCIDENTS AND FATALITIES IN SAMPLE)

	1988	1989	1990	1991	1992	TOTAL
% RELATED TO MINE CONDITIONS	38%	54%	56%	48%	45%	50%
% RELATED TO MINE PRACTICES	62	46	45	53	55	50

TABLE 4

COAL ACCIDENT & FATALITY ANALYSIS

COAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(25% SAMPLE)

	1988	1989	1990	1991	1992	TOTAL
% WITH CAUSE ADDRESSED BY LAW	31%	60%	37%	67%	48%	52%

	1988	1989	1990	1991	1992	TOTAL
% RELATED TO MINE CONDITIONS ADDRESSED BY LAW	47%	75%	65%	43%	55%	58%
% RELATED TO MINE PRACTICES ADDRESSED BY LAW	53	25	35	57	45	42

COAL ACCIDENT & FATALITY ANALYSIS

COAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(25% SAMPLE)
CAUSE ADDRESSED BY LAW

CAUSE	1988	1989	1990	1991	1992	TOTAL
% ROOF, RIB & FACE	82%	62%	77%	43%	64%	66%
% ELECTRICAL	7	16	18	43	9	19
% HAULAGE	7	23	6	0	9	9
% OTHER	0	0	0	15	19	6

TABLE 4

COAL ACCIDENT & FATALITY ANALYSIS

COAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(25% SAMPLE)

	1988	1989	1990	1991	1992	TOTAL
% WITH CAUSE NOT ADDRESSED BY LAW	70%	38%	67%	34%	53%	48%

	1988	1989	1990	1991	1992	TOTAL
% RELATED TO MINE CONDITIONS NOT ADDRESSED BY LAW	29%	45%	40%	50%	25%	40%
% RELATED TO MINE PRACTICES NOT ADDRESSED BY LAW	71	55	60	50	75	60

COAL ACCIDENT & FATALITY ANALYSIS

COAL ACCIDENTS AND FATALITIES REPORTED TO DMME
(25% SAMPLE)
CAUSE NOT ADDRESSED BY LAW

CAUSE	1988 - 1992
% HAULAGE	33%
% EQUIPMENT OPERATION & MAINTENANCE	25
% WALKWAY & TRAVELWAY	10
% ROOF, RIB & FACE	9
% ELECTRICAL	3
% OTHER	20

TABLE 4

1988 - 1992 Accidents by Classification: Metal and Nonmetal
Count by Fatal Injury

Classification	USA	VA		KY		MD		NC		TN		WV		Violtns		Nnvltns		Cndtns		Prctcs	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Electrical	24	1	4	0	0	1	0	0	0	1	4	0	0	21	87	3	12	11	46	13	54
Entrapment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Explosion Vessel Under Pressure	7	0	0	0	0	0	0	0	0	0	0	0	0	6	86	1	14	3	43	4	57
Explosives and Breaking Agent	11	0	0	1	9	0	0	1	9	0	0	1	9	11	100	0	0	3	27	8	73
Fall/Roll/Slide Rock/Material	17	2	12	1	5	0	0	1	5	0	0	0	0	17	100	0	0	14	82	3	18
Fall Face/Rib Side/Highwall	8	0	0	0	0	0	0	0	0	1	12	0	0	8	100	0	0	7	88	1	12
Fall Roof/Back	16	1	7	1	7	0	0	0	0	1	7	0	0	14	88	2	12	13	81	3	19
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Handling Mat'l	3	0	0	0	0	0	0	0	0	0	0	0	0	3	100	0	0	1	33	2	67
Handtools	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Nonpwred Haulage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Powered Haulage	93	2	2	0	0	2	2	0	0	4	4	0	0	82	88	11	12	53	57	40	43
Hoisting	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Ignitn/Explosn Gas or Dust	2	0	0	0	0	0	0	0	0	1	50	0	0	1	50	1	50	1	50	1	50
Impoundment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inundation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	38	0	0	0	0	0	0	0	0	2	5	0	0	33	87	5	13	24	63	14	37
Slip/Fall Person	19	0	0	0	0	2	11	0	0	0	0	1	5	18	95	1	5	11	58	8	42
Step/Kneel Objct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striking/Bumping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	7	0	0	0	0	0	0	0	0	0	0	0	0	6	86	1	14	4	57	3	43
Total	249	6	2	3	1	5	2	2	1	10	4	2	1	224	90	25	10	149	60	100	40

1988 - 1992 Accidents by Classification: Metal and Nonmetal
Count by Event

Classification	USA	VA		KY		MD		NC		TN		WV		Violtns		Nnvltns		Cndtns		Prctcs	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Electrical	24	1	4	0	0	1	0	0	0	1	4	0	0	21	87	3	12	11	46	13	54
Entrapment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Explosion Vessel Under Pressure	7	0	0	0	0	0	0	0	0	0	0	0	0	6	86	1	14	3	43	4	57
Explosives and Breaking Agent	9	0	0	1	11	0	0	1	11	0	0	1	11	9	100	0	0	2	22	7	78
Fall/Roll/Slide Rock/Material	15	2	13	1	7	0	0	1	7	0	0	0	0	15	100	0	0	12	80	3	20
Fall Face/Rib Side/Highwall	7	0	0	0	0	0	0	0	0	1	14	0	0	7	100	0	0	6	86	1	14
Fall Roof/Back	15	1	7	1	7	0	0	0	0	1	7	0	0	13	87	2	13	12	80	3	20
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Handling Mat'l	3	0	0	0	0	0	0	0	0	0	0	0	0	3	100	0	0	1	33	2	67
Handtools	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Nonpwred Haulage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Powered Haulage	90	2	2	0	0	2	2	0	0	4	4	0	0	79	88	11	12	52	58	38	42
Hoisting	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Ignitn/Explosn Gas or Dust	2	0	0	0	0	0	0	0	0	1	50	0	0	1	50	1	50	1	50	1	50
Impoundment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inundation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	38	0	0	0	0	0	0	0	0	2	5	0	0	33	87	5	13	24	63	14	37
Slip/Fall Person	19	0	0	0	0	2	11	0	0	0	0	1	5	18	95	1	5	11	58	8	42
Step/Kneel Objct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striking/Bumping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	7	0	0	0	0	0	0	0	0	0	0	0	0	6	86	1	14	4	57	3	43
Total	240	6	2	3	12	5	2	2	1	10	4	2	1	215	90	25	10	143	60	97	40

1988 - 1992 Fatal Accidents by Classification: Coal
Count by Fatal Injury

08/09/93

Classification	USA No.	VA NO.	VA %	KY NO.	KY %	MD NO.	MD %	TN NO.	TN %	WV NO.	WV %	Violation NO.	Violation %	Nonvltns NO.	Nonvltns %	Condition NO.	Condition %	Practice NO.	Practice %
Electrical	21	3	14	6	28	0	0	0	0	6	28	19	90	2	9	8	38	13	61
Explosion Vessel Under Pressure	3	0	0	0	0	0	0	1	33	0	0	0	0	3	100	3	100	0	0
Explosives	12	1	8	8	66	0	0	0	0	2	16	11	91	1	8	5	41	7	58
Fall/Roll/Slide Rock/Material	7	1	14	0	0	0	0	0	0	1	14	3	42	4	57	6	85	1	14
Fall Roof/Back	75	13	17	28	37	1	1	5	6	19	25	66	88	9	12	50	66	25	33
Fire	4	0	0	1	25	0	0	0	0	2	50	1	25	3	75	4	100	0	0
Handtools	3	0	0	1	33	0	0	0	0	1	33	1	33	2	66	2	66	1	33
Powered Haulage	70	3	4	22	31	0	0	1	1	18	25	34	48	36	51	55	78	15	21
Ignitn/Explosn Gas or Dust	26	8	30	12	46	0	0	0	0	6	23	21	80	5	19	26	100	0	0
Machinery	49	8	16	12	24	0	0	1	2	14	28	25	51	24	48	40	81	9	18
Slip/Fall Person	10	0	0	2	20	1	10	0	0	2	20	7	70	3	30	6	60	4	40
Other	7	1	14	2	28	0	0	0	0	0	0	3	42	4	57	6	85	1	14
Fall Face/Rib Side/Highwall	10	2	20	3	30	1	10	0	0	1	10	10	100	0	0	10	100	0	0
Handling Mat'l	2	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Hoisting	1	0	0	0	0	0	0	0	0	1	100	1	100	0	0	0	0	1	100
Inundation	2	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Entrapment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonpwred Haulage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Step/Kneel Objct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striking/Bumping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	302	40	13	97	32	3	0	8	2	73	24	206	68	96	31	225	74	77	25

1988 Fatal Accidents by Classification: Coal
Count by Event

08/09/93

Classification	USA No.	VA NO.	VA %	KY NO.	KY %	MD NO.	MD %	TN NO.	TN %	WV NO.	WV %	Violation NO.	Violation %	Nonvltns NO.	Nonvltns %	Condition NO.	Condition %	Practice NO.	Practice %
Electrical	3	0	0	1	33	0	0	0	0	2	66	3	100	0	0	0	0	3	100
Explosion Vessel Under Pressure	2	0	0	0	0	0	0	1	50	0	0	0	0	2	100	2	100	0	0
Explosives	2	0	0	2	100	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Fall/Roll/Slide Rock/Material	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fall Roof/Back	8	3	37	1	12	0	0	1	12	3	37	6	75	2	25	2	25	6	75
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Handtools	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Powered Haulage	18	0	0	6	33	0	0	0	0	4	22	12	66	6	33	14	77	4	22
Ignitn/Explosn Gas or Dust	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	12	2	16	2	16	0	0	0	0	3	25	6	50	6	50	10	83	2	16
Slip/Fall Person	3	0	0	1	33	0	0	0	0	1	33	3	100	0	0	1	33	2	66
Other	2	0	0	1	50	0	0	0	0	0	0	1	50	1	50	1	50	1	50
Fall Face/Rib Side/Highwall	2	0	0	1	50	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Handling Mat'l	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hoisting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inundation	1	0	0	0	0	0	0	0	0	0	0	1	100	0	0	1	100	0	0
Entrapment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonpwred Haulage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Step/Kneel Objct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striking/Bumping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	53	5	9	15	28	0	0	2	3	13	24	36	67	17	32	35	66	18	33

1980 - 1992 Fatal Accidents by Classification: Coal
Count by Fatal Injury

08/09/93

Classification	USA No.	VA NO.	VA %	KY NO.	KY %	MD NO.	MD %	TN NO.	TN %	WV NO.	WV %	Violation NO.	Violation %	Nonvltns NO.	Nonvltns %	Condition NO.	Condition %	Practice NO.	Practice %
Electrical	21	3	14	6	28	0	0	0	0	6	28	19	90	2	9	8	38	13	61
Explosion Vessel Under Pressure	3	0	0	0	0	0	0	1	33	0	0	0	0	3	100	3	100	0	0
Explosives	12	1	8	8	66	0	0	0	0	2	16	11	91	1	8	5	41	7	58
Fall/Roll/Slide Rock/Material	7	1	14	0	0	0	0	0	0	1	14	3	42	4	57	6	85	1	14
Fall Roof/Back	75	13	17	28	37	1	1	5	6	19	25	66	88	9	12	50	66	25	33
Fire	4	0	0	1	25	0	0	0	0	2	50	1	25	3	75	4	100	0	0
Handtools	3	0	0	1	33	0	0	0	0	1	33	1	33	2	66	2	66	1	33
Powered Haulage	70	3	4	22	31	0	0	1	1	18	25	34	48	36	51	55	78	15	21
Ignitn/Explosn Gas or Dust	26	8	30	12	46	0	0	0	0	6	23	21	80	5	19	26	100	0	0
Machinery	49	8	16	12	24	0	0	1	2	14	28	25	51	24	48	40	81	9	18
Slip/Fall Person	10	0	0	2	20	1	10	0	0	2	20	7	70	3	30	6	60	4	40
Other	7	1	14	2	28	0	0	0	0	0	0	3	42	4	57	6	85	1	14
Fall Face/Rib Side/Highwall	10	2	20	3	30	1	10	0	0	1	10	10	100	0	0	10	100	0	0
Handling Mat'l	2	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Hoisting	1	0	0	0	0	0	0	0	0	1	100	1	100	0	0	0	0	1	100
Inundation	2	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Entrapment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonpwred Haulage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Step/Kneel Objct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striking/Bumping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	302	40	13	97	32	3	0	8	2	73	24	206	68	96	31	225	74	77	25
Total Production Hours (Millions)	1,297,068	104,385		283,752		5,770		15,471		277,659									
Fatal Incident Rate	0.047	0.077		0.068		0.104		0.103		0.053									

I.R.* $\frac{\text{FATALITIES X 200,000}}{\text{PRODUCTION HOURS}}$ = Number per 100 workers for one year.

Appendix 8

1988 - 1992 Accidents by Classification: Metal and Nonmetal
Count by Fatal Injury

Classification	USA No.	VA No.	VA %	KY No.	KY %	MD No.	MD %	NC No.	NC %	TN No.	TN %	WV No.	WV %	Violtns No.	Violtns %	Nnvltns No.	Nnvltns %	Cndtns No.	Cndtns %	Prctcs No.	Prctcs %
Electrical	24	1	4	0	0	1	0	0	0	1	4	0	0	21	87	3	12	11	46	13	54
Entrapment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Explosion Vessel Under Pressure	7	0	0	0	0	0	0	0	0	0	0	0	0	6	86	1	14	3	43	4	57
Explosives and Breaking Agent	11	0	0	1	9	0	0	1	9	0	0	1	9	11	100	0	0	3	27	8	73
Fall/Roll/Slide Rock/Material	17	2	12	1	5	0	0	1	5	0	0	0	0	17	100	0	0	14	82	3	18
Fall Face/Rib Side/Highwall	8	0	0	0	0	0	0	0	0	1	12	0	0	8	100	0	0	7	88	1	12
Fall Roof/Back	16	1	7	1	7	0	0	0	0	1	7	0	0	14	88	2	12	13	81	3	19
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Handling Mat'l	3	0	0	0	0	0	0	0	0	0	0	0	0	3	100	0	0	1	33	2	67
Handtools	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Nonpwred Haulage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Powered Haulage	93	2	2	0	0	2	2	0	0	4	4	0	0	82	88	11	12	53	57	40	43
Hoisting	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	100	0	0
Ignitn/Explosn Gas or Dust	2	0	0	0	0	0	0	0	0	1	50	0	0	1	50	1	50	1	50	1	50
Impoundment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inundation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	38	0	0	0	0	0	0	0	0	2	5	0	0	33	87	5	13	24	63	14	37
Slip/Fall Person	19	0	0	0	0	2	11	0	0	0	0	1	5	18	95	1	5	11	58	8	42
Step/Kneel Objct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striking/Bumping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	7	0	0	0	0	0	0	0	0	0	0	0	0	6	86	1	14	4	57	3	43
Total	249	6	2	3	1	5	2	2	1	10	4	2	1	224	90	25	10	149	60	100	40
Total Production Hours (Millions)	1,693.585	38.671		25.493		20.006		39.564		37.888		9.751									
Fatal Incident Rate	0.029	0.031		0.024		0.050		0.020		0.053		0.041									

I.R.* $\frac{\text{FATALITIES X 200,000}}{\text{PRODUCTION HOURS}}$ = Number per 100 workers for one year.

Appendix 9

MINERAL MINE VIOLATION RATE

	1988	1989	1990	1991	1992
VIOLATION RATE ALL MINERAL MINES	28	24	28	29	28
VIOLATION RATE TOP QUARTILE	63	44	97	90	93
VIOLATION RATE	6	3	11	8	12

* PER 200,000 PRODUCTION HOURS

DMME 8/17/93

DEMOGRAPHICS OF MINERAL MINES IN TOP QUARTILE COMPARED TO ALL MINERAL MINES

	1988	1989	1990	1991	1992
# MINES IN TOP QUARTILE					
SMALL	85/350	85/361	93/356	76/297	76/307
LARGE	8/23	11/21	1/21	2/14	5/15
TOTAL	93/373	96/382	94/377	78/311	81/322
# EMPLOYEES IN TOP QUARTILE MINES					
AVERAGE SIZE	20/14	23/13	10/12	13/13	11/12
% OF TOTAL IN TOP QUARTILE	36%	44%	21%	25%	25%
EMPLOYEE HOURS IN TOP QUARTILE MINES					
AVG HOURS	40,562	46,811	17,082	23,850	18,726
	25,672	22,624	21,672	23,636	23,151
% OF TOTAL IN TOP QUARTILE	39%	52%	12%	25%	20%
TONS OF PRODUCTION IN TOP QUARTILE MINES					
AVG PRODUCTION	362,099	451,632	191,728	253,716	171,205
	248,980	229,342	242,999	217,921	214,223
% OF TOTAL IN TOP QUARTILE	36%	57%	20%	29%	20%

DMME, 8/17/93

MINERAL MINE OPERATORS IN TOP QUARTILE YEAR AFTER YEAR

	1 YEAR ONLY	2 OF 5 YEARS	3 OF 5 YEARS	4 OF 5 YEARS	ALL 5 YEARS
# OF MINERAL MINES WITH SAME OPERATOR	131	55	27	17	12
# OF MINERAL MINES WITH MULTIPLE OPERATORS	2	3	1	0	0
TOTAL	133	58	28	17	12

DMME, 7/18/93

MINERAL SAFETY INDICATORS PROPORTION OF INCIDENTS OCCURRING IN MINES WITH HIGHEST VIOLATION RATE

	1988	1989	1990	1991	1992
% CLOSURES IN TOP QUARTILE	78 18/23	97 28/29	69 11/16	70 14/20	68 21/31
% LOST TIME INJURIES IN TOP QUARTILE	79 56/71	73 30/41	39 17/44	60 21/35	53 25/47
% SERIOUS INJURY IN TOP QUARTILE	100 2/2	62 8/13	67 8/12	33 3/9	13 1/8
% FATALITIES IN TOP QUARTILE	100 2/2	0 0/1	0 0/2	0 0/1	100 2/2

TABLE 2 DMME 8/17/93

MINERAL SAFETY INDICATORS TOP AND BOTTOM THREE QUARTILE BY VIOLATION RATE

	1988	1989	1990	1991	1992
LOST TIME INJURY RATE					
TOP QUARTILE	2.97	1.34	2.13	2.26	3.30
BOTTOM 3 QUARTILES	0.51	0.53	0.82	0.51	0.74
ALL MINES	1.48	0.95	1.18	0.95	1.26
SERIOUS INJURY RATE					
TOP QUARTILE	0.11	0.37	1.00	0.32	0.13
BOTTOM 3 QUARTILES	0.00	0.24	0.12	0.22	0.24
ALL MINES	0.04	0.30	0.29	0.24	0.21
FATALITY RATE					
TOP QUARTILE	0.11	0.00	0.00	0.00	0.26
BOTTOM 3 QUARTILES	0.00	0.05	0.06	0.04	0.00
ALL MINES	0.04	0.02	0.05	0.03	0.05

PER 200,00 PRODUCTION HOURS

TABLE 2 DMME 8/17/93

COAL MINE VIOLATION RATE

	1988	1989	1990	1991	1992
VIOLATION RATE ALL COAL MINES	50	57	52	54	47
VIOLATION RATE TOP QUARTILE	215	205	211	219	174
VIOLATION RATE BOTTOM 3 QUARTILES	26	37	36	39	33

* PER 200,000 PRODUCTION HOURS

DEMOGRAPHICS OF COAL MINES IN TOP QUARTILE COMPARED TO ALL COAL MINES

	1988	1989	1990	1991	1992
# MINES IN TOP QUARTILE					
SMALL SURFACE	10/139	7/120	6/92	6/108	5/73
LARGE SURFACE	0/4	0/0	0/2	0/3	0/2
SMALL UNDRGRND	109/303	97/276	83/245	84/221	69/190
LARGE UNDRGRND	0/30	1/24	3/29	1/32	0/29
TOTAL	119/478	105/420	92/368	91/364	74/294
# EMPLOYEES IN TOP QUARTILE MINES					
AVERAGE SIZE	14/23	15/24	17/28	15/27	17/31
% OF TOTAL IN TOP QUARTILE	15%	16%	15%	14%	14%
EMPLOYEE HOURS IN TOP QUARTILE MINES					
AVERAGE HOURS	18,390	20,554	17,180	17,900	21,001
	41,203	41,542	48,442	46,600	54,301
% OF TOTAL IN TOP QUARTILE	11%	13%	9%	10%	10%
TONS OF PRODUCTION IN TOP QUARTILE MINES					
AVG PRODUCTION	40,809	47,613	46,283	48,982	55,461
	97,339	104,330	126,253	116,149	144,304
% OF TOTAL IN TOP QUARTILE	11%	11%	9%	11%	10%

DMME, 8/17/93

COAL MINE OPERATORS IN TOP QUARTILE YEAR AFTER YEAR

	1 YEAR ONLY	2 OF 5 YEARS	3 OF 5 YEARS	4 OF 5 YEARS	ALL 5 YEARS
# OF COAL MINES WITH SAME OPERATOR	181	161	13	6	4
# OF COAL MINES WITH MULTIPLE OPERATORS	15	23	10	7	0
TOTAL	196	184	23	13	4

DMME, 7/18/93

COAL SAFETY INDICATORS PROPORTION OF INCIDENTS OCCURRING IN MINES WITH HIGHEST VIOLATION RATE

	1988	1989	1990	1991	1992
% CLOSURES IN TOP QUARTILE	51 99/192	45 71/158	42 67/158	68 129/191	41 76/184
% LOST TIME INJURIES IN TOP QUARTILE	16 177/1078	15 159/1096	11 111/1041	14 131/911	12 93/777
% SERIOUS INJURY IN TOP QUARTILE	18 15/84	19 25/130	15 15/99	19 13/70	15 9/62
% FATALITIES IN TOP QUARTILE	0 0/4	14 1/7	20 1/5	67 6/9	0 0/12

DMME 8/17/93

COAL SAFETY INDICATORS TOP AND BOTTOM THREE QUARTILE BY VIOLATION RATE

	1988	1989	1990	1991	1992
LOST TIME INJURY RATE					
TOP QUARTILE	16.17	14.73	14.05	16.10	11.97
BOTTOM 3 QUARTILES	10.34	12.26	11.45	10.17	9.49
ALL MINES	11.00	12.6	11.70	10.70	9.70
SERIOUS INJURY RATE					
TOP QUARTILE	1.37	2.32	1.90	1.60	1.16
BOTTOM 3 QUARTILES	0.79	1.37	1.03	0.74	0.73
ALL MINES	0.86	1.49	1.11	0.83	0.78
FATALITY RATE					
TOP QUARTILE	0.00	0.09	0.13	0.74	0.0
BOTTOM 3 QUARTILES	0.05	0.08	0.05	0.04	0.17
ALL MINES	0.04	0.08	0.06	0.11	0.15

PER 200,00 PRODUCTION HOURS

TABLE 2 DMME 8/17/93

Appendix 11

NUMBER OF CRIMINAL CHARGES FILED 1988 - 1992
UNDER VIRGINIA MINE SAFETY LAW
PER LAW SECTION

LAW SECTION(S)	NUMBER OF CHARGES/RESULTS
45.1-12	(3) charged: Court set 9/7/89; continued because all individuals did not show; cannot get any other info from the court; apparently was dropped.
45.1-13 & 45.1-104(c)	(1) charged: Guilty; cannot be a mine operator or act as a FCMF in VA
45.1-12.1 & 45.1-105(b)	(3) charged: Settled out of court; company presented safety seminars to mining industry (3) charged; Settled; company did safety talks at all their mines (7) charged: Fined and given days/suspended
45.1-98 A & 45.1-105(b)	(1) charged: Fined and given number of days/suspended
45.1-25	(1) charged: Fined and given number of days/suspended
45.1-22	(3) charges: Guilty, Fined, operating without a mining license; partial suspension of each fine on each charge. (1) charged: Guilty, Fined and suspended
45.1-12.1	(6) charged: Fined and number of days/suspended (1) charged: Warrant not served/out of state individual (2) charged: Dropped, court continuance and time lapse (2) charged: "nolle prossed", settled

TOTAL NUMBER OF CHARGES FILED: 34

SOUTHMOUNTAIN COAL CO. INC., Mine No. 3

INVESTIGATION OVERVIEW OF MINE EXPLOSION

MINE HISTORY

Southmountain Coal Company, Inc., Mine No. 3 was located off State Route 620 in the Guest River area of Wise County, Virginia. This mine was licensed as a new mine on August 8, 1990 with the operator being William R. Elkins. The mine license was renewed on February 6, 1992 with the operator changed to W. Jack Davis.

The mineral resource of the mine is owned by Penn Virginia Resources Corporation and is sub-leased to Virginia Iron Coal & Coke Company that contracted with Southmountain Coal Company, Inc., owned by Apple Coal Company & Affiliates, Inc. to perform the mining.

This one-section drift mine was developed approximately 8,000 feet into the Imboden coal seam which averages six feet in thickness. The Southmountain Coal Company, Inc., Mine No. 3 employed 34 workers on two production shifts (day and night) and one general maintenance shift (evening). Approximately 1,000 tons of coal were produced daily by continuous mining methods.

DIVISION OF MINES ACTIVITIES

The Division of Mines' activities at the Southmountain Mine No. 3 from December 12, 1991 to December 7, 1992 included 12 visits during the year. The visits included three complete regular inspections, a ventilation survey, roof evaluations, investigations of roof falls and an electrical survey.

During the first three quarters of 1992, a Division of Mines inspector completed the required inspections. A complete regular inspection was scheduled for Wednesday, December 9, 1992 for the fourth quarter.

DM's Electrical Specialist visited the Mine No. 3 on September 28 and 29, 1992. This was the last visit from a Division of Mines' representative prior to the explosion.

RESCUE/RECOVERY

Monday
December 7, 1992

An explosion occurred at approximately 6:15 AM at the Southmountain Coal Company, Inc., Mine No. 3. Nine (9) coal miners were underground at the time of the explosion. Eight (8) fatalities and one (1) serious injury resulted from the explosion.

A belt cleaner, who was located at the #2 belt drive underground, was seriously injured. The belt cleaner was knocked down and rolled by the forces, but managed to escape to the surface. The belt cleaner was taken to the hospital for treatment.

Division of Mines inspector was notified at 7:15 AM. Division of Mines Chief was notified, and personnel were dispatched to the mine.

Division of Mines inspector arrived at the mine site at 7:30 AM. Black smoke was billowing from the #3 and #4 portals. The mine office, mine portal canopies, conveyor belt and fan were damaged.

Division of Mines inspector issued a control order under the Mine Safety Laws of Virginia (45.1-21 C) to preserve the scene of the accident. Mine records and map were recovered.

At this time, eight miners were still underground.

All DM staff were placed on alert and informed to either report to the mine site, or to be on stand-by at the Big Stone Gap or Keen Mountain offices. A Command Center was established in the Big Stone Gap office and staffed by DM and DMME personnel around the clock in 12-hour shifts through the duration of the rescue and recovery activities. State-designated mine rescue teams were placed on alert, and all other Virginia mine rescue teams were notified of the explosion.

A Control and Decision Group was established to make all decisions concerning the rescue and recovery effort. Company representatives, MSHA District 5 Manager and DM Chief made up the Decision Group. The Decision Group was assisted by mine rescue personnel, engineers, specialists, supervisors and inspectors.

The Command Center at the DMME office reviewed all information on file for the mine, and DMLR personnel examined adjacent, underlying and overlaying mining operations as to

what effect those operations could have had on the explosion and any possible hazards those operations may have presented to a rescue and recovery operation. Division of Gas and Oil personnel were sent to Big Stone Gap to evaluate whether any gas wells were in the vicinity and any effect any gas wells may have had on the explosion and rescue/recovery operations.

DM, MSHA, Company officials and employees began rescue and recovery operations. A mine rescue team entered the mine at 9:00 AM to take air quality/quantity measurements and to install monitor tubing. Four mine rescue teams began to systematically explore the mine and to install ventilation controls using natural ventilation.

Tuesday
December 8, 1992

A mine rescue team advanced to crosscut #81 at 2:05 AM. At the entrance to the One Left Panel, the team encountered 6.4% methane, 3000 ppm carbon monoxide, rolling smoke and heat. The team was forced to retreat to the surface.

An eight-inch borehole was drilled from the surface to the #3 entry on the One Left Panel.

Wednesday
December 9, 1992

The borehole was completed at 10:28 AM, and monitoring tubes were installed.

Two mine rescue teams re-entered the mine at 5:20 PM. A rescue team discovered seven (7) victims. At 9:00 PM, the team encountered in excess of 9% methane and 18% oxygen in an area where a battery-powered scoop was located. Due to dangerous accumulations of methane, the mine rescue teams retreated to the surface. The seven victims were not recovered and the eighth miner was not located.

Thursday
December 10, 1992

A second borehole of 12-inch diameter was drilled at survey station #530 located at the back end of the pillared One Left Panel.

Friday
December 11, 1992

The second borehole was completed at 4:08 PM. An exhausting pump and monitoring tubes were installed. The methane content was 50% and carbon monoxide was 550 ppm.

Saturday
December 12, 1992

The methane content had decreased to 3.9% and the carbon monoxide had reduced to 210 ppm at 3:30 PM. Rescue teams re-entered the mine at 4:40 PM. The teams located the eighth victim at 7:00 PM and prepared the miners for transport to the surface. The rescue teams arrived on the surface at 8:57 PM, and the miners were transported from the mine.

Security was maintained at the mine site on a 24-hour basis during rescue, recovery and investigation procedures.

INVESTIGATION

Mr. Chairman and members of the task force, I would like to present an overview of DMME's investigation into the explosion at the Southmountain Mine No. 3. The mine Safety Laws of Virginia grant DM the jurisdiction to investigate explosions and serious accidents.

DMME's Division of Mines and MSHA's investigating teams met on December 14, 1992 to discuss the investigation procedures. Investigation teams were established in the areas of:

- Flames and Forces
- Ventilation
- Mapping
- Electrical
- Mine Dust Surveys
- Roof Control
- Photographing

- Collection of evidence

Investigation teams were composed of experienced investigators, which included inspectors, engineers, specialists and supervisors. Representatives of the operator assisted and acted in a consulting capacity. A representative of the employees participated in the investigation.

An order of closure was issued on December 7, 1992 to secure the accident scene until the investigation was completed. The investigation began on December 14, 1992 by mapping and photographing the surface areas. The underground investigation began on December 18, 1992.

In order to establish a safe mine atmosphere, the One Left Panel was ventilated by utilizing a temporary stopping line directing ventilation to the face region. A surface mechanical fan that was installed at the #4 entry provided mechanical ventilation for the mine. The abandoned pillared areas were ventilated by using an exhaust pump mounted to the 12-inch borehole, which was drilled into the pillared areas during the rescue and recovery operations.

The investigation teams entered the mine at approximately 12:20 PM on December 18, 1992. All pertinent data was plotted on the mine map. Information plotted included the equipment, electrical installations, stoppings, the extent of flames and forces as could be determined by visual observation, and other pertinent information relating to the explosion.

The flames and forces team initiated the evaluation of One Left Panel. The team started at the face area and progressed to the surface. The flames and forces teams examined areas for evidence to determine the direction of forces and extent of flame, or heat. This evidence included materials exposed to heat, accumulations of coke, soot and dust on timbers, roof bolts plates, etc. The team examined miner locations and injuries, equipment damages, ventilation controls, results of laboratory analyses of dust samples and other items.

The mapping teams began mapping the One Left Panel. The mapping teams began at the feeder and progressed to the face areas. The mapping teams detailed ventilation controls, electrical equipment, evidence of flames and forces and all pertinent information.

The mine dust samplers started at the surface and progressed toward the One Left Panel. Mine dust band samples were taken from roof, rib and bottom in six entries at every third row of coal pillars. All mine dust samples were sent to MSHA's laboratory and analyzed for incombustibility and coking.

The photography and collection of evidence teams assisted the investigation teams as

needed. As the investigation was conducted and as the groups discovered physical evidence or personal effects that were relevant to determining the cause of the accident and/or explosion source, immediate action was taken to prevent any disturbance of the evidence. The personal effects/evidence team was then contacted and immediately proceeded to the location for the taking of notes, photographs and, when possible, the taking possession of the evidence. This evidence was marked and stored in a controlled area.

The electrical teams began on the surface and progressed toward the One Left Panel. The electrical teams examined all underground electrical equipment and cables for evidence of arcing, smoke, soot or coking. Permissible enclosures and cables were examined for internal/external damage, arcing or evidence of internal explosion. Some permissible components and material were sent to MSHA's Approval and Certification Center and to the Bureau of Mines' Research Center for testing and examination.

The investigation teams completed analyzing, evaluating and mapping the surface and underground areas and equipment at the mine site on December 22, 1992.

Upon completion of the underground investigation, interviews were conducted from January 12, 1993 through January 21, 1993 with 31 persons who may have had information pertaining to the explosion. The interviews were conducted by members of DMME's Division of Mines and MSHA's investigation teams. Representatives of Southmountain Coal Company, Inc. and the employees were present during interview process. Questioning was under the direction of DM/MSHA chief investigators and legal advisors. Cross-examination was not allowed.

Representatives of the company and miners were allowed to submit written questions for clarification to DM/MSHA investigators for their consideration.

The statements were completely voluntary and recorded for transcription. Each person interviewed had the right to have an attorney or other representative present and was advised of civil and criminal sanctions contained in the 1977 Mine Safety and Health Act and the Mine Safety Laws of Virginia. They were also advised that the purpose of the investigation was to determine the cause, or causes of the explosion.

Each interviewee was given the opportunity to review the opening statement. Each interview began with the reading of the opening statement. The interviewees could object to the presence of representatives of company and the miners. Some interviewees objected to the representatives being present. The representatives of the company and miners left the room

during these interviews. The questioning of all interviewees followed the same format.

DMME's Division of Mines and MSHA's investigation teams re-interviewed eight people associated with Southmountain Coal Company and interviewed a contractor's employee on March 25 and 26, 1993. The second interviews were formatted to clarify previous statements and address discrepancies.

The Chief and members of the investigation team visited and briefed the families of the victims on the progress of the investigation on several occasions throughout the rescue and recovery operations and investigation.

On February 9, 1993, DMME representatives presented to the Task Force of Advisors a mine overview, a synopsis of rescue and recovery operations and an overview of the scope and methodology of the investigation.

On April 8 and 9, 1993, DMME representatives presented an investigation update to the Task Force of Advisors. The update included details of DM's inspection activities, location of miners and equipment, ventilation controls, mine electrical system, map of mine conditions, evidence found and a video tape of underground and surface conditions.

On May 6, 1993, DM completed the investigation of the explosion at the Southmountain Mine No. 3. Investigation team representatives issued violations and orders to company representatives.

SUMMARY

The investigation revealed that the volume of air on the active section was inadequate to render harmless and carry away flammable and explosive gases. As pillar recovery mining was conducted throughout the One Left, One Right and Two Right Panels, the roof continued to deteriorate and to fall releasing methane from the gaseous Kelly rider seam of coal, which was located directly above the abandoned workings and active section of the Southmountain Mine No. 3.

The failure to maintain the air flow in its proper volume and direction at the active section and around the abandoned areas allowed methane to accumulate in the abandoned areas and to migrate down the #1 entry to the working section. The methane/air mixture was ignited by a source in the crosscut left of survey station #378 between the #1 and #2 entries of

the One Left Panel. The probable ignition source, a butane cigarette lighter, was found in this crosscut. The methane explosion resulted in sufficient forces and flames to suspend and to ignite coal dust which continued to propagate to the surface.

Analyses of mine dust samples revealed that inadequate rock dust was present and that coal dust contributed to the explosion.

Major contributing factors to the explosion were:

- Failure to properly ventilate the active One Left Panel pillar recovery section
- Failure to adequately ventilate the abandoned One Left, One Right and Two Right Panels
- Failure to maintain adequate ventilation controls
- Failure to apply proper amounts of rock dust to the mine roof, face and ribs to minimize explosion hazards
- Failure to properly conduct weekly examinations of the One Left, One Right and Two Right abandoned areas in their entireties
- Failure to prohibit the use of smoking articles and other flame-making devices underground
- Failure of some of the miners to refrain from carrying smokers' articles underground
- Failure to comply with the stipulations of the approved roof control plan
- Failure to properly conduct preshift examinations

The following summary of orders and violations relating to the explosion were cited during the investigation:

- A total of nine orders were issued. The first order was issued to secure and control the accident scene pending completion of the investigation. The other eight orders were issued for non-compliance in the areas of: sufficient ventilation of the active pillar line, sufficient ventilation of the abandoned area, properly maintaining the permanent stopping line, adequate rock dust applications, properly conducting weekly examinations of abandoned areas, prohibiting the possession and use of smokers' articles underground, the approved five-cut partial

pillaring plan in that stumps of coal were removed between cuts, and second mining which included the taking of a sixth cut from the back of the pillar block.

- A total of four violations were issued for non-compliance in the areas of: preshift examinations, recording the volume of air entering the intake split of the One Left Panel, properly reporting the findings of the preshift examinations to personnel prior to their entering the mine, and accurately recording the results of the preshift examinations.

On May 7, 1993, the final report was completed.

On May 11, 1993, the Chief of the Division of Mines presented the final report to the Wise County Commonwealth Attorney for consideration and necessary action. In addition, the Chief will prefer written charges before the Board of Examiners concerning actions of certain persons at the Southmountain Mine No. 3 who hold certificates issued by the Board of Examiners.

On May 12, 1993, DMME representatives answered questions and reviewed the final report with the Task Force of Advisors.

The Division of Mines' staff members are conducting safety talks at all mines in the Commonwealth concerning the contributing factors to this explosion.

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Appendix 13

TASK FORCE OF ADVISORS
FINAL REPORT

SUMMARY

On January 27 1993, Virginia Governor L. Douglas Wilder outlined the duties of the Task Force of Advisors that he created to assist the Department of Mines, Minerals and Energy in investigating the December 7, 1992 explosion that killed eight miners at the Southmountain Mine #3 in Wise County. The ten member Task Force was chaired by former Delegate James W. Robinson and was comprised of coal industry, union, state police, and citizen representatives. The Governor's appointees to the Task Force were: Danny C. Davidson, District 28 representative of the United Mine Workers of America; McDonald Hagy, Manager of Safety for Island Creek Coal Company; Gerald Kendrick, Safety Director for Jewell Smokeless Coal Corporation; Max W. Kennedy, Jr., International Representative, Health and Safety for the United Mine Workers of America; Waldon R. Kerns, Professor at Virginia Tech; Donald L. Ratliff, General Manager of Operations for Paramont Coal Corporation; Bruce K. Robinette, General Manager of the Duffield Development Authority; Frank Williams, Deputy Assistant Director for the Virginia State Police; and Roger Williams, International Representative for the United Mine Workers of America.

Governor Wilder assigned the duties of the Task Force of Advisors as follows:

Receive a briefing on the scope and methodology of the investigation;

Suggest revisions to the investigation and methodology to improve the quality of the findings while ascertaining additional information pertinent to determining the accident's cause;

Ensure that the investigation is consistent with existing requirements of Virginia mine safety law; review the findings of the final report for thoroughness, completeness, and accuracy;

Consider recommendations contained in the final report and suggest any additional specific recommendations that could prevent a similar incident from occurring; and

Make the mining community aware of the findings and recommendations in the final report and enlist that community's cooperation in adopting necessary changes.

Governor Wilder stated that "the work of the Task Force is an important mechanism to invest the expertise, ideas, and assistance of the larger mining communities to determine what caused the fatal accident and to enlist the participation of the community in a united effort to prevent another similar tragedy."

Between February 9, 1993 and July 8, 1993, the Task Force of Advisors met five times. The meetings were held at the Holiday Inn in Norton, Virginia. Each of the meetings were recorded verbatim by a court reporter. A copy of the transcript of each meeting is attached for reference and is hereby made a part of the final report of the Task Force of Advisors.

February 9, 1993

At the first Task Force meeting, the Department of Mines, Minerals and Energy staff presented the Task Force with the scope and methodology of the investigation. This report included a presentation by Mr. Tim Thompson, District 7 Manager with the federal Mine Safety and Health Administration, who serves as that agency's lead investigator on the Southmountain mine #3 explosion. Mr. Thompson provided the Task Force of Advisors with the scope and methodology of the investigation from the federal perspective.

The Virginia Division of Mines Chief, Harry Childress, provided the Task Force of Advisors with an overview of the Southmountain mine #3 and then discussed in detail the rescue and recovery operations. Opie McKinney, Mine Inspector Supervisor for the Department of Mines, Minerals and Energy, Division of Mines and lead investigator for the state, discussed how the interviews were conducted of witnesses and other mine personnel. This included the opening and concluding statements that were read into the record and provided to each person being interviewed.

Questioning during the interviews were conducted by Tim Thompson and Opie McKinney. The Mine Safety and Health Administration was accompanied by, among others, Mr. Gerald Feingold who is a solicitor with the Department of Labor. Mr. Zane Scott, Virginia Assistant Attorney General, also attended the interviews representing the Division of Mines. Mr. Donnie Shortt was the representative of Southmountain Coal Company, and Mr. Jesse Darrell Cooke was the chosen representative of the miners. Those being interviewed had the right to request that their transcripts be held confidential. Both the Mine Safety and Health Administration and the Department of Mines, Minerals and Energy have honored any request that an interview be held confidential.

Following the presentation on the scope and methodology, the Task Force members began to question DMME presenters. The following selection of questions and responses serve to illustrate their comprehensive nature. The DMME presenters were asked who prepared the questioning. They responded that the questioning was prepared jointly by MSHA and DMME staff with assistance from their attorneys. They were asked if individuals being interviewed had a right to have an attorney present. They responded that they did. They were asked if DMME has the authority to subpoena people. It was responded that they did, to a limited extent. There were questions about whether or not the atmosphere surrounding the interview process may have suppressed witness testimony. The presenters responded that every effort was made to make the interviewees as comfortable as possible.

An attorney representing three of the families of miners killed in the Southmountain explosion informed the Task Force that he would like to submit numerous questions to the Task Force regarding the scope and methodology of the investigation. The Chairman agreed to the request and told the attorney that if he would submit the questions to him he would get them to DMME.

DMME was asked to provide the Task Force members with a copy of all the questions that were asked during the interview process. That information was provided following the meeting.

February 25, 1993

At the second meeting of the Task Force, the Chairman informed the group that all the work at the February 25 meeting would be pertaining to what they heard from the Division of Mines at the last meeting. In other words, a review of the transcript covering the scope and methodology as presented by DMME staff.

There were no representatives of the Department of Mines, Minerals and Energy invited to or present at the second meeting.

Comments were offered by individual Task Force members in the following areas:

- To maintain control over the scene of the accident to protect the integrity of the scene so that nothing is changed or altered.
- To have portable phones that can be taken to any accident scene to maintain optimum communication.
- To keep the families better informed during the rescue and recovery effort.
- To begin investigation on the day of the accident instead of waiting until the rescue and recovery is complete.
- To interview people as soon as possible and initiate a preliminary investigation.

Considerable discussion by all the members of the Task Force ensued regarding the process that the members wished to use in conducting the next Task Force meeting where the Department of Mines, Minerals and Energy staff would make a factual briefing on the investigation. It was decided that the Department of Mines, Minerals and Energy staff would make their entire presentation. The Task Force and members of the audience could write questions down as the presentations were being made. Following all of the presentations by the Department of Mines, Minerals and Energy staff, the Task Force members would be afforded an opportunity to ask their questions and those that members of the audience, including the victims families, had provided to the Task Force members. It was requested that the DMME bring copies of maps to illustrate their findings as well as those maps that were used during the interview process.

April 8 and 9, 1993

At the third meeting, the entire day of April 8 was consumed by the Department of Mines, Minerals and Energy's presentation updating the Task Force on the status of the investigation. This included a presentation of all of their findings as a result of on the surface and underground investigations at the mine. The comprehensive report lasted several hours and provided the Task Force of Advisors complete details on the findings of fact. No conclusions were offered by the DMME staff.

The morning of April 9 began with a showing of a video of the Southmountain #3 mine. The video was taken underground from the entrance of the mine and provided detailed documentation of conditions to the working face. This provided the Task Force of Advisors and members of the public present at the meeting with actual documented footage of the mine accident scene as well as other mine conditions as discovered by state and federal investigators.

Individual Task Force members asked numerous questions, including questions provided by family members. The Division of Mines staff responded to all questions that did not call for conclusions.

May 21, 1993

This meeting of the Task Force of Advisors was held primarily to review the Division of Mines draft final investigation report on the Southmountain #3 mine. The chairman also provided the Task Force with a draft format of the final report to the Governor that would transmit the work of the Task Force. They were asked to review and provide comments and suggestions.

The entire day was devoted to questions directed to the DMME staff regarding the draft final report. The Task Force members reviewed the transcripts of the DMME presentation of findings on the draft final report and each Task Force member had the opportunity to ask clarifying questions. This review was to ensure that the final report would be thorough, complete and accurate.

Following the questioning, the DMME staff was dismissed and the Task Force reviewed and discussed the draft Task Force report to the Governor. The draft report also included recommendations that had been made to date by various Task Force members. Extensive discussion followed as the Task Force began considering its recommendations. The chairman concluded the meeting by requesting each Task Force of Advisors member to forward all their recommendations to him so they could be fully considered at the final meeting.

July 8, 1993 - Final Meeting

On this date, with all Task Force of Advisors members present, the final meeting took place. The members thoroughly reviewed, considered, discussed and decided upon the recommendations that would be forwarded to

Governor Wilder and the General Assembly sub-committee charged with reviewing the Mine Safety Laws of Virginia.

Correspondence

Since the creation of the Task Force of Advisors, the Chairman has received several letters and has responded to each one. The letters and the responses are attached as an appendix to this report.

Conclusion

The work of the Task Force of Advisors required commitment and dedication by each member. The process used by the Task Force afforded the families of the victims and the general public full opportunity to witness the work it performed. Each member of the Task Force asked comprehensive questions for clarification or additional information on the scope and methodology of the investigation. Members of the victims families and members of the audience also provided questions to the Task Force members who asked the questions and received responses.

The Division of Mines inspection team did a thorough job in the evaluation of events and conditions prior to the explosion, of conditions at the time of the explosion and of the findings of the investigation. During the investigation and reporting period, state agency personnel followed the established procedures and conducted themselves in an acceptable manner. In general, the Task Force agrees with the conclusion of the investigation team. We found the explosion was professionally and thoroughly investigated and the findings were accurate based on the evidence.

After having the opportunity to hear and discuss all the areas assigned to the Task Force of Advisors, including a comprehensive report on the rescue and recovery operations, scope and methodology of the investigation, findings of fact, and the final reports with conclusions, the Task Force of Advisors offers the following recommendations:

A. Suggested revisions to future investigation techniques and methodology which would improve the validity of investigation findings.

1. Recommend that the interview process that is presently being utilized in these mine disasters be reviewed to see if the techniques and procedures could be changed or redesigned so that the best information can be obtained in these cases.

2. Secure authority for the Chief to order autopsies.

3. Require an internal review Board of DMME inspection activities conducted at the mine where three or more fatalities occurred and release the report to the public.

4. Recommend that the legislative joint sub-committee review the role and duties of the Mine Safety Board in relation to the review of all serious accidents and fatalities.

5. Explore the use of Robotics in dangerous rescue operations.

B. **Suggested ways that could prevent accidents and fatalities:**

1. Strengthen the Code requirements related to methane detection and ventilation, such as:

   a. Recommend that the legislative joint sub-committee study the frequency and methods of examining bleeder entries and abandoned area.

   b. Disallow use of the flame safety lamp as a primary methane detection device.

   c. Require a sufficient number of approved methane detection devices, ensure that they are properly maintained and require all miners working inby the last open crosscut be trained and certified in the proper use of the devices.

   d. Require operators to record actual methane readings in the mine record books.

   e. Recommend that the legislative joint sub-committee study reporting method of recording and posting of information of preshift inspections and examinations.

2. Improve compliance with existing mine safety law, such as:

   a. Request the legislative joint sub-committee review the authority of enforcement and penalties for violations on mine safety laws to include review of permitting operators who have consistent and numerous violations to continue mining.

   b. Amend the state law to require that all mine foreman be able to demonstrate on questioning by DMME personnel a thorough understanding of mining plans approved at that mine. The failure to demonstrate a thorough understanding of the plans shall result in DMME preferring charges to the Board of Examiners for decertification of the mine foreman.

   c. Require the operator to identify and update information on the person responsible for safety and health as part of the license requirements.

   d. Request the legislative joint sub-committee to review 45.1-5. Schedule of inspections, conduct of inspections, certificates of inspections, accidents putting the miners in dangerous conditions. Require DMME supervisors to spend time observing mining and inspection practices.

   e. Require transportation be provided to transport DMME inspectors in a reasonable amount of time.

3. Provide more effective miner involvement in ensuring safe work conditions, such as:

   a. Recommend that the operator be required to train all miners required to work inby the last open crosscut. The requirement of 45.1-54, then the subcommittee can decide the time frame.

   b. Establish or continue an 800 hotline number to accept calls on anonymous complaints: post the number at each mine during working hours and the phone will be manned during regular working hours with a recording giving a number for emergencies.

   c. Recommend that the legislative joint sub-committee amend the state law to prohibit any person from discharging or in any manner discriminating against or interfering with the exercise of the statutory rights of any miner because such miner has made safety complaints or has refused to perform what the miner reasonably and in good faith believes to be unsafe work.

4. Improve the knowledge of miners to work safely, such as:

   a. Require periodic retraining in order to maintain certification.

   b. Restore funding and reactivate the Safe Mine Program.

   c. Deliver special emphasis training on the dangers of smoking and the importance of rock dust.

5. Improve the preparedness of operators and the state to respond to mine disasters and emergencies, such as:

   a. Require operators to develop, maintain, post, train, and conduct practice drills of the emergency response plans which include a list of next of kin for all employees, a fire communication plan and evacuation procedure, and the identification of waterlines, the numbering system of brattice, the location of escapeways and smoker search programs.

C. Other recommendations

1. DMME must fully consider all recommendations of the 1993 Task Force on Southmountain No. 3 Mine explosion.

2. Recommend that the legislative joint sub-committee review 45.1-26, concerning prohibited acts by miners with emphasis being placed on substance abuse and a way to govern and oversee that section of the law.

3. Amend 45.1-5 requiring DMME inspectors to review all record books at all coal mines during regular inspections and compare their inspection findings to the preshift and onshift examination books and that these books be standardized for all coal mines in Virginia.

4. Recommend that the legislative joint sub-committee consider amending the law to require copies of the complete shift, preshift and onshift examination reports be posted on the check, at or around the check in boards in visible sight.

5. Recommend that the mine disaster investigative procedures plan that is now in place be reviewed to see what could be altered or changed to address certain issues, especially the issue of the length of time from when the disaster occurred to when interviews started taking place and an effort to reduce that amount of time.

The members of the Task Force of Advisors and the public submitted numerous additional recommendations of how to improve safety in Virginia's coal mining industry. Since the work of the Task Force was directed to the Southmountain Coal Company Mine #3 explosion and suggesting ways that similar incidents could be avoided, many recommendations were outside the limited authority of the Task Force. Consequently, the entire set is offered and referred (see appendix) to the members of the HJR 645 study committee. The Task Force of Advisors requests that the legislative study committee conduct a thorough review of these transcripts as part of their consideration of how the Mine Safety Law can be improved.

Appendix 14

DEPARTMENT OF MINES, MINERALS, AND ENERGY

Summary of State Actions Implementing
Recommendations of the Governor's Advisory Committee
on Mine Safety in Virginia - 1983

1. Amend State Code to permit Division of Mines Chief to reduce regular inspections at certain mines with good safety records. The time saved would be used to increase inspections at mines with a pattern of chronic violations or poor safety records.

STATUS: Completed

- Code amended in 1984 to provide that all underground mines receive one complete inspection at least every 90 days, unless a mine qualified for reduced inspections. DM Chief would recommend reduced inspections to Virginia Mine Safety Board for approval/disapproval.

- Code amended in 1987 to reduce frequency of surface mine inspections once every 90 days to once every 180 days.

- No requests for reduced inspections have been approved by the Board.

2. Provide computerized information system to track individual mine safety records and "red flag" mines with high accident rates. Adopt a system of information sharing between state and federal mine inspection programs.

STATUS: Ongoing

- DMME maintains two separate systems; the (coal) Mine Safety System developed in 1986, and the (nonfuel minerals) Mineral Mining System developed in 1990. Each system is composed of subsystems including information on licensing or permitting, inspections, violations, training, tonnage, accidents, and receipts. The Mine Safety System also tracks certification, mine safety program, and diesel equipment inventory information. The Mineral Mining System also contains subsystems for complaints and hearings.

- Inspectors and supervisors use the systems to periodically review data to help them identify accident and violation trends which require additional attention and training. The inspector uses the information to present informal safety talks to miners and company management on such topics as roof control plans, materials handling, ventilation controls, haulage, and safety equipment, among others. The information is also used to recommend mines for special focus programs, assist in accident investigations, schedule regular and follow-up inspections, and determine when spot inspections are warranted.

- Information from the systems is used communicate accident and violation trends to both coal and mineral mining industries via informational mailings. Department staff can access data from the mine site via portable computers.

- The Federal Mine Safety and Health Administration (MSHA) has only recently computerized its records on stand-alone personnel computers, which cannot interface with the central DMME system. DMME is now setting up access for MSHA to the DMME Mine Safety System; however, DMME cannot secure access to MSHA's system. DMME and DM management have scheduled quarterly meetings with MSHA to review areas of problems and common concerns.

3. Inspectors' eight-hour workday should begin when they arrive at their first mine site and end upon leaving their last mine site.

STATUS: Completed

- Mine inspector work areas were consolidated into common geographic areas and reassignments were made based on where inspectors lived to minimize travel time for inspections and improve response time for complaint investigations and emergencies. Analysis in 1992 showed coal inspectors spend 40 hours on the job, not including travel to and from mine sites.

- Assignment of mine inspectors and supervisors to geographically centralize areas are modified periodically in order to: insure inspectors are not assigned to inspect a mine where previously employed, to best match resources to needs, to adjust assignments whenever a new inspector is hired, and to insure even workload distribution.

4. Technical specialists should be hired to consult with mine operators on roof control, ventilation, and electrical engineering.

STATUS: Completed

- The technical specialists positions were created and approved by the General Assembly in 1984. Six coal technical specialists, two each in the areas of roof control, ventilation, and electrical engineering were hired by DMME in 1985. With the elimination of the gassy/non-gassy mine classification by the General Assembly, DMME has hired two additional ventilation specialists to assist mine operators develop, and review bleeder plans required of all coal mines by January 1, 1984.

5. A mining engineer should be hired to serve in a support role to the Division Chief.

STATUS: Completed

- The Mine Safety Engineer position was established August 1, 1986, and filled on December 1, 1986. The mine safety engineer directs the division's technical assistance programs; directs and reviews the approval process for mine plans; conducts accident, fatality and complaint investigations; provides operator assistance to improve mine safety; manages DM technical training services; evaluates DM technical policies and procedures; advises technical assistance staff; evaluates effectiveness of laws; identifies and manages implementation of law changes; oversees State-designated Mine Rescue Team Program; and provides expert engineering consultation to the Chief and industry.

6. Undertake a reorganization of the Division of Mines to reflect the addition and function of these new personnel.

STATUS: Completed

- The DMME was created in 1985, consolidating all regulation of coal and mineral mining into one department. In 1987 the DM was reorganized into three functional areas of service: enforcement, training and research, and operators assistance. Also in 1987, functions related to gas and oil and non coal mineral extraction regulation were reorganized into separate divisions within DMME so that the DM can focus on coal mine safety programs. DM is currently organized into areas covering compliance, mine safety services, and certification/regulatory board services.

7. Upgrade mine inspectors' salaries to $30,000 a year to better attract and retain qualified personnel.

STATUS: Completed

- Inspectors' salaries were upgraded as of July 1, 1984, from Grade 12 ($19,884 - $27,150) to Grade 14 ($25,804 - $35,246). Current Grade 14 salary range is $33,568, to $51,253.

8. Require all new mine inspectors to pass a thorough physical examination, and all currently employed mine inspectors to undergo a complete physical examination to better determine inspection assignments appropriate to their physical capabilities.

STATUS: Completed

- As a condition of employment, all mine inspectors must pass a physical examination and be able to bend, stoop, climb, walk long distances, and crawl in confined spaces. To sustain inspection frequency, quality and productivity recommended under item #3, each inspector must be physically and technically able to complete all job duties; therefore, special assignments due to physical limitations are not feasible.

9. Establish a continuing education and training program for all mine inspectors, and institute formal standards, courses, and examinations for all mine inspectors and instructors. Make greater use of the MSHA Academy.

STATUS: Completed

- The Division of Mines has a continuing education and training program for its employees. Monthly in-house training sessions were established in February, 1986, using both internal and external trainers.

- Mine inspectors receive training from MSHA academy via satellite downlink and by enrolling for courses not available or convenient via downlink. Other training is received via downlink and through attending seminars at other locations (such as Penn State University, University of West Virginia, and Blue Ridge Diesel) as availability and resources allow. Additional skill improvement training is obtained through community colleges and other centers as available.

10. Include a "Good Samaritan" clause in the state mining law to specifically exempt individual mine rescue team members and the team's parent company from all legal liability when engaged voluntarily in a mine rescue operation.

STATUS: Completed

- The "Good Samaritan" law for mine rescue and recovery was first added in 1984 to Section 8.01-225, and subsequently added in 1985 to Section 45.1-33.5:4 of the Code.

11. The General Assembly should establish a study committee to examine the whole issue of mine rescue in Virginia, with the aim of giving the state a mine rescue capability.

STATUS: Completed

- A legislative subcommittee established in 1984 (HJR 150) recommended legislation, passed in 1985, establishing state designated mine rescue teams. The legislation authorizes use of state-designated rescue teams, state employed rescue teams, sets qualification standards for team members, established the mine rescue fund, and addressed liability issues during rescue operations. As of August 16, 1993, 78 coal mines were assigned to the state designated teams. All other coal mines and all mineral mines have in-house mine rescue teams or contract with outside mine rescue teams.

12. Amend the conflict of interest laws to bar mine inspectors for a period of two years following their employment with the state from inspecting any mine at which they had previously been employed.

STATUS: Completed

- Section 45.1-4(b) of the Code of Virginia was amended in 1984 so that the Chief nor any officer of the Division of Mines can perform an inspection at any mine site at which that individual was last employed for a period of two years following termination of his employment. Implementing this requirement limits the ability to assign and/or rotate mine inspectors and supervisors to limited geographic areas.

13. Clarify the Code with respect to coal stock ownership by the Chief of the Division of Mines and his Assistant.

STATUS: Completed

- Section 45.1-4(b) of the Code was clarified and made more specific in 1984 to prohibit ownership of stock by the Chief or any officer of the Division of Mines in any corporation owning a coal mine.

14. Impose no new taxes or user fees on the mining industry.

STATUS: Completed

- No new license taxes or user fees have been imposed on the mining industry to support the safety inspection and training program. The last increase of the mine license application fee, from $25.00 to $75.00, occurred in 1978. User fees provided $32,975 to the Division of Mines in 1992 (1.03% of the DM budget) and $30,780 to the Division of Mineral Mines in 1992 (2.97% of the mine safety share of the DMM budget).

- In 1985, a $1,000 annual rescue fee was set by Code for mine operators who wished to have state designated mine rescue teams assigned to their mines. Placed in the Mine Rescue Fund, 90% of the funds are passed through and divided equally among all state-designated teams.

15. State should take a stronger role in the education, training, and certification of miners.

STATUS: Ongoing

- DMME has implemented various education and training programs to improve mine safety since 1984. They include:

  - Governors Mine Safety Program initiated April 1984 targeting small mines, including:

    - DM and the two coalfield community colleges offered 52 "Topic of the Month" seminars from 1985 through 1990 in small mines (with fewer than 50 employees). Training materials provided to large mines.

- DM provided training to mining company executives on implementing safety programs in their mines.

- DMME initiated community information program via public service announcements and sponsored mine safety poster contests.

Mine Safety Awareness program started with MSHA funding but was shifted to state funds as federal funding for the program was eliminated. In 1990, the program closed due to statewide revenue shortfalls; however, DM inspectors continue to provide informal on-site safety talks during inspections.

DMME evaluated the mine-safety awareness program in 1989. In a sample of 70 mines that participated from 1984 through 1989, fatality rates fell from above the national and state average to below. Accident frequency rates fluctuated in a pattern similar to the national and state averages. Total work days lost increased from 1984 to 1985, and then declined each year from 1986 to 1989.

- MSHA State Grants: The divisions of Mines and Mineral Mines have used the MSHA state grant from 1987 through 1991 to provide training for miner certification and mine safety. Amounts received have been as follows:

Year	Amount		
	Federal	State	Total
1987 base grant	$195,000	$48,750	$243,750
1988 base grant	210,811	52,203	263,014
1988 supplemental grant	10,000	2,500	12,500
1989 base grant	201,000	50,250	251,250
1989 supplemental grant	60,000	15,000	75,000
1990 base grant	220,000	55,000	275,000
1991 base grant	240,244	60,061	300,305
Total for training	$1,137,055	$283,764	$1,402,819

In 1992, MSHA changed the state grant eligibility criteria, eliminating training and reducing federal money toward JSA. The 1993 state budget was amended to add $140,000 in state general funds to continue the DMME mine safety and certification training program.

DM provides certification training to coal miners in the following areas:

underground/surface mine foreman; electric repairman and chief electrician; gas testing; underground shot firer and surface blaster; hoist operator.

DM also provides federally required 8-hour annual retraining for coal miners to retain state electrical certification.

DMM provides certification training to mineral miners in the following areas:

surface foreman certification and refresher; surface blaster and refresher; first aid; MSHA general instructor.

DMM runs general safety classes, both on-site sessions on specific safety topics, and centralized classroom sessions on hazard communications and emergency planning for management.

- General Safety Training and Education Activities: DMME undertakes a number of other activities for mine safety education and training, including:

    - Safety alerts issued to the mining community throughout year on special safety issues such as seasonal dangers and awareness of practices based on recent accident records.

    - During Technical Specialists' visits, DM staff conducts training for miners and operators in safe practices in roof control, ventilation, and electrical.

    - DM sponsors State Mine Safety Awards (4th in 1993), and participates in the federal annual mine safety award program.

    - DM sponsors annual mine rescue team competition.

- DMME has reviewed the certification program to evaluate needed changes and has proposed the following changes to the board:

    - February, 1989: DM recommended and the Board of Examiners approved discontinuing oral examinations for certifications.

    - February, 1989: DM presented, and the Board approved, final regulations establishing new certifications for Underground Diesel Engine Mechanics and Diesel Engine Mechanic Instructors.

    - July, 1991: Based on DM recommendation, the Board suspended certification for cable splicers. This work must be performed only by certified electricians.

    - Summer 1991: DMME evaluated certification program regulatory and operational controls and recommended changes to require periodic retraining of certified miners and to require certificate holders to notify DM of changes of address. Board of Examiners was briefed on this recommendation July 31, 1991 but deferred action. DMME instituted new procedures to review applicant documentation to ensure certification requirements are properly met.

- October, 1991: DMME completed an internal draft of legislation to improve the miner certification program, incorporating suggestions made to the Board in July. The proposal included the following changes:

  - require periodic training to keep certificates up-to-date;
  - increase fees to fund training programs;
  - provide regulatory authority for Board of Examiners to set requirements for qualifications, training, testing and examinations; and
  - eliminate reciprocity.

  DMME proposed a Qualified Instructor Program to expand training available to miners in Virginia. The proposal called for establishing a train-the-trainer program and certifying trainers.

- December, 1991: In order to meet budget reductions from continuing revenue shortfalls, DMME proposed refocusing remaining resources away from inspections and enforcement towards improving education, training and certification programs. Legislative package was not introduced and the proposed budget reductions were partially restored.

- September, 1992: DMME staff presented legislative and regulatory options for improving miner certification program to Board of Examiners. The Board deferred action on the proposed changes.

- October, 1992: DMME submitted a state budget amendment of $480,000 for FY 1992-94 to expand DM's training and certification services, and cover the anticipated loss of federal funding. The state budget amendment was not successful. Congress restored MSHA grant funds to previous levels.

- November, 1992: DMME submitted a request for a $447,502 federal grant (w/ $111,876 state match) to conduct job safety analyses for small coal mines, mobile equipment safety talks at mineral mines, provide substance abuse hazards training, update study guides for certification training, conduct mine safety talks, expand certification training, and conduct roof-control training.

  MSHA approved a reduced amount of $230,000 (w/ $57,500 state match) for the coal mine job safety analysis, mineral mine mobile equipment safety talks, and substance abuse training. Five (coal) job safety analysis specialists have been hired under the grant. The mineral mine services are being provided by mineral mine inspectors.

-Administrative changes made by DMME to 'mprove management of the certification program: computerizing certification exams, and updating study guides, course outlines and lesson plans on an ongoing basis.

16. An extensive review of current surface coal mining laws should be undertaken to clarify and strengthen those sections dealing with safety requirements.

STATUS: Ongoing

- o DMME emphasizes use of available resources to improve the law and programs that enhance underground mine safety consistent with recommendation one of the Governor's Committee. This is based on a number of factors:

  - Underground coal mine production has increased; surface mine production decreased. Surface mine production has dropped from 35% of total production in 1975 to 18% in 1991.

  - Underground mining in Virginia is changing. As shallower coal seams are mined out, underground mining has shifted to deeper seams which are typically more difficult to mine, leading to new safety concerns.

  - Virginia's geology increases difficulty of underground mining compared to some other states. Coalfield geologic faults require special safety measures be taken to protect against roof and rib falls.

- o DMME has eliminated duplication in areas affecting worker safety among its coal mine safety, coal surface mining reclamation, and gas and oil regulatory programs.

- o There have been two additional efforts to evaluate the mine safety laws to identify needed improvements:

  - In May, 1987, interns with the Office of the Attorney General started a comparison of state and federal mine safety laws and regulations. Based on the comparison and analysis by DM staff, DMME convened industry and labor work group to develop changes to the mine safety law. The group was unable to reach consensus on recommended changes.

  - Spring 1991/Project Streamline: DMME met with mine safety leaders from industry, labor, and educational institutions to identify mine safety needs. DMME then drafted a mine safety strategic plan to reach consensus among interested groups on priorities and to clarify public and private roles. The group was unable to reach consensus on the details of how to implement the plan.

COMMODITY	MSHA		DMME		DIFFERENCE (DMME -MSHA)	
AMPHI-BOLITE	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
				1	0	1
APLITE	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
BASALT	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
CLAY	Producing 2	Non Producing	Producing 11	Non Producing	Producing 9	Non Producing
	2		6	5	4	5
COAL REFUSE	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
			1		1	
DIORITE	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
DOLOMITE	Producing 2	Non Producing	Producing 2	Non Producing	Producing 0	Non Producing
	1	1	1	1	0	0

COMMODITY	MSHA		DMME		DIFFERENCE (DMME -MSHA)	
FELDSPAR	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
FULLERS EARTH	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
GEMSTONES	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
			1		1	0
GNEISS	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
				1	0	1
GOLD	Producing 0	Non Producing	Producing 2	Non Producing	Producing 2	Non Producing
				2	0	2
GRANITE	Producing 34	Non Producing	Producing 44	Non Producing	Producing 10	Non Producing
	34		36	8	2	8
GRAVEL	Producing 3	Non Producing	Producing 17	Non Producing	Producing 14	Non Producing
	3		13	4	10	4

COMMODITY	MSHA		DMME		DIFFERENCE (DMME -MSHA)	
GREEN-STONE	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
GYPSUM	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0
IRON OXIDE	Producing 0	Non Producing	Producing 3	Non Producing	Producing 3	Non Producing
			1	2	1	2
KAOLIN	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
				1	0	1
KYANITE	Producing 3	Non Producing	Producing 4	Non Producing	Producing 1	Non Producing
	2	1	2	2	0	1
LIME-STONE	Producing 49	Non Producing	Producing 68	Non Producing	Producing 19	Non Producing
	48	1	50	18	2	17
LIMONITE	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing
	1		1		0	0

COMMODITY	MSHA		DMME		DIFFERENCE (DMME -MSHA)	
MARBLE	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
				1	0	1
MARL	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
			1		1	0
QUARTZ	Producing 0	Non Producing	Producing 1	Non Producing	Producing 1	Non Producing
	0		1		1	0
QUARTZ-ITE	Producing 1	Non Producing	Producing 4	Non Producing	Producing 3	Non Producing
	1		2	2	1	2
SAND	Producing 27	Non Producing	Producing 169	Non Producing	Producing 142	Non Producing
	23	4	114	55	91	51
SAND & GRAVEL	Producing 32	Non Producing	Producing 89	Non Producing	Producing 57	Non Producing
	29	3	63	26	34	23
SAND-STONE	Producing 5	Non Producing	Producing 8	Non Producing	Producing 3	Non Producing
	5		7	1	2	1

COMMODITY	MSHA		DMME		DIFFERENCE (DMME -MSHA)	
SCHIST	Producing 0	Non Producing	Producing 1	Non Producing 1	Producing 1	Non Producing 1
SHALE	Producing 10	Non Producing	Producing 37	Non Producing 10	Producing 27	Non Producing 10
SLATE	Producing 2	Non Producing	Producing 4	Non Producing 1	Producing 2	Non Producing 1
SOAP-STONE	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing 0
TITAN-IUM	Producing 0	Non Producing	Producing 1	Non Producing 1	Producing 1	Non Producing 1
TRAP-ROCK	Producing 9	Non Producing	Producing 9	Non Producing	Producing 0	Non Producing 0
VERMI-CULITE	Producing 1	Non Producing	Producing 1	Non Producing	Producing 0	Non Producing 0
TOTAL	189		491		302	
TOTAL	179	10	348	143	169	133

Appendix 16

DIVISION OF MINERAL MINING
EXCAVATION ACTIVITY EVALUATION CHART

1. Is the excavation activity related solely to a construction or farming use on the same site as the excavation?
   If yes, refer to the local soil and erosion control agency.
   If no, continue to question 2.

2. What material is to be excavated?

   a. Predominantly organic material (including topsoil, soil)
      If yes, refer to the local soil and erosion control agency.

   b. Unconsolidated mineral materials? _____
   c. Consolidated mineral materials? _____.
      If yes to b. or c., continue to question 3.

3. Will mineral be processed, either on site or off site, before use?

   a. If yes, get a DMM permit.
   b. If no, continue to question 4.

4. Will mineral be used as fill?

   a. If no, get a DMM permit.

   b. If yes, answer the following:
      1) Will fill be used on site or adjacent to the excavation?
         a). If yes, refer to the local soil and erosion control agency.
         b). If no, continue questions.

      2) Will fill be used by the operator? _____
         a). If no, get DMM permit.
         b). If yes, continue questions.

      3) Will fill material be sold or exchanged? _____
         a). If yes, get DMM permit.
         b). If no, continue to question 5.

5. Is excavation activity planned to operate only one-time or only intermittently?

   a. If yes, refer to the local soil and erosion control agency.
   b. If no, DMM permit decision requires further analysis.

DKB/RMR/WOR/KJR Rev.#4 2/20/91

Appendix 17

Summary of Testimony at Public Hearings

A. Clinch Valley College, Wise; August 17, 1993

1. Dink Shackelford of the Virginia Mining Association urged the subcommittee to consider the benefits and costs of any new regulations or programs. Individuals must step forward and assume responsibility for making their job safer. Education and retraining are preferable to more penalties and regulations.

2. Elizabeth Mullins, widow of a miner who died in the Southmountain Mine explosion, urged the subcommittee to remember the profound effect of mining disasters on ordinary citizens. She recommended (i) requiring that miners be educated about their "safety rights;" (ii) establishing a 24-hour toll free hotline for anonymous reporting of unsafe conditions or practices; (iii) requiring coal operators to record the exact levels of methane found in pre-shift checks, rather than using such vague descriptions as "trace;" and (iv) requiring that all miners who work at the face be certified to test for methane.

3. Tony Oppegard, Directing Attorney of the Mine Safety Project of the Appalachian Research and Defense Fund of Kentucky, told the members that the deplorable conditions that existed in the Southmountain No. 3 mine were not an aberration, and the coal fields are full of small non-union mines where safety is only observed when mining inspectors are underground. He proposed 20 specific changes to the mining law, four of which were previously mentioned by Mrs. Mullins. Others included: requiring mine inspectors and technical specialists to read all entries in the mine's record books for hazardous conditions; requiring operators to provide and maintain methane detectors to workers on each shift; requiring that bleeder entries be traveled on examined daily, rather than weekly as is now required; requiring all mine foremen to be able to demonstrate a thorough demonstration of the mine's ventilation, roof control and evacuation plans; prohibiting a representative of a mine operator from attending interviews conducted by DMME personnel during an accident investigation; prohibiting retaliatory discharges of miners who have made safety complaints or refused to perform unsafe work; requiring DMME to post signs informing miners of their right to refuse unsafe work and of the "800" telephone hotline number; making the giving of advance notice of a safety inspection to an operator a felony; making the failure to perform required examinations for hazardous conditions a felony; making the falsification of a mine examination book of training certificate a felony; making the bypassing of the ground fault monitoring system on any piece of electrical equipment ("bridging out" or "blocking in" of a ground fault safety device) a felony; requiring DMME to stagger its mine inspection schedules; requiring mine operators to provide promptly transportation underground for mine inspectors upon their arrival; require mine inspectors to undergo a complete physical exam every 12 months;

requiring that completed copies of preshift and onshift examination reports be posted daily in a conspicuous place; and requiring DMME to conduct an internal review of its actions, and to publish a report of such review, after any accident involving 3 or more fatalities.

4. Douglas Lester, Manager of Health and Safety for Westmoreland Coal Co., suggested that between 80 percent and 95 percent of accidents are caused by unsafe acts, not unsafe conditions. Suitable education and training programs are necessary to modify human behavior and thus improve work habits.

5. Donald Ratliff, General Manager of Operations for Pyxis Resources Co. and a member of the Mine Safety Board, commended the responsiveness of the DMME. He criticized the make-up of the Board, which by statute has 3 members recommended by the UMWA and 3 members selected from the Commonwealth at large. The Board would be more productive if non-union miners were represented, and certified underground foremen, surface foremen, and chief electricians were represented on the Board.

6. Lloyd Robinette, Jr., Manager of Safety for Pyxis Resources Co., noted that Virginia's mining industry is subject to double regulation under state and federal laws. Training and education should be considered as a means of correcting human error in the workplace. He questioned whether more duplication of the federal mine safety inspection program is necessary.

7. Roger Williams, UMWA member at Westmoreland Coal Co., questioned the value of additional training if the state is not around to enforce it. He also said that it is important to focus on small operators.

8. Charles Hubbard, a UMWA member, wants to see DMME coordinate its inspections with MSHA in order that the federal and state inspections do not occur close to each other. Inspectors need to be able to collect rock dust samples. The state should have monetary penalties to back up violations.

9. Jack Crawford, Vice President for Health & Safety at Pittston Coal Management Co., objected to allowing the imposition of civil penalties against the coal industry. Operators are already subject to civil penalties for violations of the federal mine safety law. The state mine safety program, unlike its occupational safety and health program and environmental programs, does not have primacy which removes federal involvement. Monetary penalties have not been proven to be a deterrent to law violations, and closure orders are the strongest deterrent possible.

10. F. E. Tankersley, employed in safety and training at a coal mine, believes that the greatest impact on improving the safety of miners can be accomplished through continual education and training. He praised the DMME's job safety

analysis program as increasing safety awareness. Increasing inspections and assessing civil penalties are "negative" measures which cannot solve the problem of our miners being hurt. The state should prioritize mines and focus its inspection resources on those with the worst records.

11. Steve Gilly, an UMWA member, wants state inspectors to be required to spend five minutes alone with each employee. Currently, miners do not have an opportunity to tell inspectors about unsafe conditions other than in the presence of the operator's representatives.

12. Bo Willis, an UMWA member, complained about the lack of laws requiring the prompt repair of atmospheric monitoring systems. These systems monitor air quality for carbon monoxide. While they are not in operation, testing can be done by hand monitors.

13. Steve Hale, an UMWA member, made four suggestions: miners representatives should be allowed to accompany state inspectors; the procedure for revoking certifications should be simplified; advanced technology, such as highwall mining, is not adequately addressed; and bridging out electrical switches should be subject to the same penalty as tampering with methane monitoring equipment.

14. Jerry Owens, an UMWA member, said that fines and penalties need to be assessed for violations. Other suggestions offered which were not duplicative of previous remarks included requiring that isolated intakes be "smoke free" or free of power lines and belts, and that regulations governing the storage of small containers of diesel fuel be reviewed.

15. Harold Charles, an UMWA member, recommended that miners representatives be permitted to accompany state inspectors without loss of pay or fear of losing their jobs. The laws on communications should require two-way communications, such as telephone lines, be provided for miners in extended areas.

16. Ed Rudder of the Safety Department at Pittston Coal, urged that training and education be improved in the state law. He said that he would not do away with current enforcement measures, but would shift the emphasis to training and education.

17. James L. Weeks, an industrial hygienist and consultant to the UMWA, recommended that all mine operators be required to install particulate filters on all underground diesel equipment, and that the exposure limit for nitrogen dioxide be reduced to one part per million as a 15 minute short term exposure limit. He also expressed concern that the MSHA system for measuring coal dust in mines has collapsed, and several non-union operators in Virginia have

been convicted of fraud. If coal dust is uncontrolled and unmonitored, he warned that the incidence of Black Lung disease will increase.

18. Paul McCloskey, retired, praised a safety training program operated at two community colleges which targeted mines with the highest frequency of accidents. The program ceased when funds became unavailable. He suggested that a portion of the coal severance tax earmarked for road construction be shifted to mine safety training programs. He urged that an emphasis be put on methane gas.

19. Sam Church, an UMWA representative, complained that something needs to be done about the "outlaw coal operators." He cited the example of a mine operated by J&T Coal Company, which was found guilty of mine safety laws and may be fined by MSHA. The owners of the corporation filed bankruptcy and have opened a new company operating a mine a short distance from the J&T operation. He recommended that greater coordination with MSHA's computer system could help spot these outlaws.

B. Southwest Virginia Community College, Richlands; August 18, 1993

1. Anthony Flaccavento of the Catholic Diocese endorsed the recommendations of the Southmountain study. He also criticized the state for not being able to prevent owners of mines (such as J&T) found to have violated safety laws from reopening mines. He urged the members to amend the Code to disallow continuation of mining if a principal officer is convicted of a serious safety violation. Also, the number of inspectors should be increased, and the state should be allowed to levy civil penalties.

2. Jackie Marshall, a private citizen, stressed the need to instill deeply in each worker his responsibility that at any moment they may cause someone else to be hurt. He suggested that awareness of safety issues be raised by running public service advertisements on radio stations before shift changes and erecting billboard signs.

3. McDonald Hagy, Safety Inspector at Island Creek Coal Co., was critical of the current duplication of inspections by state and federal programs. The resources of the state could be used more productively in training and education. He provided the subcommittee with a report of the National Academy of Sciences on fatalities in small underground coal mines, which concluded that the principal forms of assistance that states should offer to small mine operators are technical assistance and miner training.

4. Ron Mullins, Director of Safety and Training at The United Company, fears that this study will result in duplication of MSHA's program. The federal law already allows MSHA to levy civil penalties for federal violations, and MSHA

already requires a 40 hour orientation training for new miners and an 8 hour annual update for all experienced miners.

5. Kay Poole of Clinchfield Coal Co. voiced support for programs similar to the job safety analysis (JSA) program.

6. Dennis Burress of Local Union 2421 recommended that section 45.1-31 should be amended to give employees an input into any special safety rules adopted by an operator. He also suggested that (i) thermal dryers and other surface structures and conditions be addressed in the law; (ii) the law regarding maintenance of stairway platforms, runways and floor openings be strengthened; (iii) laws dealing with the use of chemical wetting agents and hazardous waste are needed; (iv) requirements for lighting at refuse and stock piles are needed; (v) the law should specify a private band for underground communications systems, and operators should be required to monitor the radios; and (vi) greater punishment is needed for anyone who bridges a safety device breaker or switches.

7. Mike Nuckles recommended six changes to the mine safety law. First, every coal mine should be required to have an isolated intake escapeway. Miners should not be forced to work at mines where dangerous conditions exist, such as a 5 percent methane level. Miners' representatives should have the right to travel with state mine inspectors without loss of pay. Fines and jail time should be imposed on mine foremen whose reports say that it is safe to work when it is not. More spot inspections are needed at small mines.

8. Roy Clanton of Local Union 2232 urged that the law require that local Commonwealth's Attorneys be required to prosecute all violations of the law. Mr. Clanton repeated earlier comments regarding miners accompanying inspectors and the taking of dust samples. He added that regulations should ban welding and cutting near the mine face.

9. Glenn Herbert of Local Union 2421 recommended that operators who have installed optional safety equipment, such as a "dead man switch," on machinery be required to maintain such devices. Operators should also be required to maintain safe seating on machinery. In addition, certified persons should be required to inspect electric trailing cables daily.

10. Wilbur R. Maxy, a retired miner, complained that it does no good to pass laws but not put teeth in them to see that they are enforced. Clean air is the most important thing, and the laws should focus on coal dust and methane gas. He criticized the current enforcement system because courts do not know anything about mining, and urged the creation of a special court.

11. Phillip Keene, an employee at the Island Creek Central Shop, urged that central shops be covered by the mine safety law even though they may be off mine premises.

12. Dennis Smith of Local Union 2421 expressed displeasure at how the mining laws are enforced. Large mines and small mines are not being treated equally. He also recommended that a rescue team composed of mine inspectors be formed. Such a team would aid the preservation of an accident scene, thereby improving the investigation.

13. Danny Sparks of Local Union 2232 disputed statements that state and federal inspections are duplicative. State inspectors need the authority to take immediate action. Additional comments included: (i) amending the provision that requires mines be evacuated if main fans stop to require immediate evacuation; (ii) criticism of provisions of the law which give specific standards but add "or as prescribed by the Chief;" a board or committee should have the power to change standards; (iii) the lifetime nature of certifications should be abolished, and renewals should be required; (iv) section 45.1-74 regarding transportation of employees should require that mantrips not be away from areas where miners are working for more than a reasonable time; and (v) questions regarding the ratio of inspectors whose background is in management to those whose
background was as a regular coal miner.

14. Luther Horn of Local Union 2421 asked that the subcommittee not reduce the number of inspectors. He also complained about accumulations of coal dust in jacks in longwall mines that are never rock dusted. He also discussed the revocation of certificates of mine foremen who have caused accidents.

15. Joe Clark, Safety Inspector for UMWA District 28, cited difficulties of safety committees in getting permission of operators to attend meetings. The requirement that EMTs be notified of accidents within a reasonable time was criticized as open to interpretation. He also reiterated earlier comments regarding dead men switched, communications systems, and hazardous waste. The Department noted that the federal government is now in the process of writing regulation on hazardous waste disposal. Finally, he would like the law to provide that the decision of an inspector to write a citation cannot be overridden by his supervisor.

16. Max Kennedy, an UMWA representative, described the work of the ad hoc committee on mine safety training of the Mine Safety Board. The top priority identified was targeting mines with the highest accident rates. Additional comments concerned: (i) the need for more frequent inspection of the air flow around gob areas; (ii) deficiencies in ventilation requirements regarding methane levels above 2 percent at the intersection of returning air courses; (iii)

the need to make sure that plans are being followed; (iv) better use of training aids and equipment; and (v) the need to define what level of methane constitutes an imminent danger. He was also critical of the change to the law pursuant to the recommendation of the advisory committee following the McClure mine disaster that good mines have a reduced frequency of inspections. In his opinion, the determination of proper frequency should be made by the Chief and not based on applications made by operators.

17. Joe Main, Administrator of the UMWA's Department of Occupational Health and Safety, criticized Virginia's record of placing second or third nationally in mining deaths in each of the years from 1988 to 1992. He stressed the need for a system to identify the persons who exercise control over a mine operation and prohibiting egregious violators from getting licenses to operate new mines. He also supports the levying of monetary penalties as an incentive for compliance with mine safety laws. He supplied a copy of the regulations for West Virginia's penalty system, and urged that it be used as a model. Additional suggestions included: (i) DMME review of its investigations of fatal mine accidents; (ii) arranging mine inspections so they cannot be predicted by the operator; and (iii) increased funding for additional enforcement personnel at DMME to target high risk mining operations.

18. Jeff Grizzle, coal mine operator, stated that at some point miners need to be responsible for their own safety. The education of people is the only way to prevent accidents.

19. Barbara Altizer, Executive Director of the Virginia Coal Council, said that the mining industry is alone in having both a federal and state agency enforcing similar regulations. The key to improving safety performance lies not in more regulation or increased inspection, but in education.

20. Peggy Barber, coordinator for mine safety training at Southwest Virginia Community College, urged the subcommittee avoid a hodgepodge of special training programs and lay a foundation for comprehensive programs. Specific recommendations for a training program included (i) professional development for instructors; (ii) resources to offset tuition costs; (iii) utilization of resources and people in the area; and (iv) pooling nationwide resources into a clearinghouse of information that will be available to anyone.

21. Tom Asbury, Manager of Safety at Pittston Coal, objected to the suggestion that the state get into the business of providing mine rescue coverage. It is already addressed in the federal mine safety law, and many big companies already have mine rescue programs. The state's resources should be focused on training and education rather than recovery work.

Appendix 18

Opinion Survey on the Effectiveness of Virginia's Mine Safety Law and Issues for the Future

The 1993 General Assembly passed House Joint Resolution 645 establishing a joint subcommittee to study whether changes are needed to the Virginia Mine Safety Law of 1966. The subcommittee is surveying persons associated with Virginia's mining industry to assist in identifying which areas of the existing law provide adequate protection of miners and which do not. Subcommittee members also want to identify important issues to be addressed in the study.

You will not need to identify yourself when completing the survey. We wish to maintain confidentiality of person responding to the Subcommittee.

Please complete the survey by June 28, 1993 and return it to Franklin D. Munyan, staff to the study committee (Division of Legislative Services, General Assembly Building, 910 Capitol Street, 2nd Floor, Richmond, Virginia 23219), in the enclosed stamped, self-addressed envelope.

==========

This survey addresses issues concerning Virginia's entire mining industry. You may answer this survey to express your viewpoint on all or particular segments of the industry. Please indicate if you are providing your answers with regard to (check any or all of the following):

80	Underground Coal Mining
50	Surface Coal Mining
16	Underground Mineral Mining
84	Surface Mineral Mining

Circle the **one** selection that best reflects your opinion about the current Virginia laws on mine safety.

SA - Strongly agree
A - Moderately Agree
N - No opinion
D - Moderately disagree
SD - Strongly disagree

A. Adequacy of Virginia Mine Safety Law

SA A N D (SD) 1. Use of identical standards for underground and surface mining operations will provide greater safety than use of separate standards.

SA A N D (SD) 2. Use of identical standards for coal and mineral mining operations will provide greater safety than use of separate standards.

(SA) A N D SD 3. The use of different standards for different types of underground coal mines based on their physical characteristics will provide greater safety than the use of identical standards for all types of underground coal mines.

SA A N D (SD) 4. The Virginia Mine Safety Law should establish standards for miner safety only, such as those limiting the type of equipment allowable in mines, and not establish standards for miner health, e.g., standards for setting limits on airborne contaminants in the mine atmosphere.

(SA) A N D SD 5. State inspections conducted quarterly for underground mines and semi-annually for surface mines are adequate to ensure compliance with the Virginia Mine Safety Law.

(SA) A N D SD 6. Criminal prosecution of violations, with no civil enforcement, provides an adequate enforcement mechanism for the Virginia Mine Safety Law.

(SA) A N D SD 7. Amending the Virginia Mine Safety Law to allow civil penalties to be assessed against violators would better deter violations of the law.

(SA) A N D SD 8. The types of certifications issued by the Board of Examiners that are currently set by law are adequate to ensure safe operations and conditions in mines.

(SA) A N D SD 9. The current qualifications for certifications issued by the Board of Examiners are adequate to ensure safe operations and conditions in mines.

(SA) A N D SD 10. The current reciprocity requirements, which do not provide automatic reciprocity but allow persons to demonstrate that their out-of-state certifications meet Virginia's standards for certifications, are reasonable to ensure persons certified in Virginia are qualified.

SA A N D SD 11. Additional certification requirements, such as continuing education or renewal, are needed to ensure certified persons maintain current skills in their specialized tasks.

SA A N D SD 12. The existing certification revocation procedures allow cases to be heard in a timely manner.

SA A N D SD 13. The existing definition of mines, which covers underground mines, surface mines, tipples, prep plants, shops and offices on the mine site, and does not cover facilities off the mine site, provides adequate protection to mine workers.

SA A N D SD 14. The ventilation standards now governing all coal mines (whether previously classified as gassy or nongassy) are adequate to ensure a safe mine atmosphere is maintained.

15. The Virginia Mine Safety Law provides for adequate standards for mine transportation in the following areas:

SA A N D SD a. travelways and escapeways
SA A N D SD b. mantrips
SA A N D SD c. hoisting of workers
SA A N D SD d. transportation of materials, supplies, and equipment
SA A N D SD e. other mobile equipment

16. The Virginia Mine Safety Law provides adequate standards for:

SA A N D SD a. electrical systems
SA A N D SD b. mechanical, electrical, and diesel equipment
SA A N D SD c. roof, rib, and face ground control
SA A N D SD d. the storage, transportation and use of explosives by workers
SA A N D SD e. protection against the off-site effects of blasting
SA A N D SD f. control of unsafe surface conditions
SA A N D SD g. communication systems in mines
SA A N D SD h. fire prevention and control, including storage of combustible materials and rock dusting
SA A N D SD i. storage and handling of hazardous materials
SA A N D SD j. storage and handling of bulk materials such as at material piles and hoppers
SA A N D SD k. illumination

SA A N D SD l. personal protection, such as hard hats, eye and hearing protection, and safety shoes

SA A N D SD m. mapping of underground and surface mines

SA A N D SD n. shafts and slope construction

SA A N D SD o. surface building and other construction

SA A N D SD p. accident reporting and recordkeeping

SA A N D SD q. mine rescue

SA A N D SD r. the level of dust in the atmosphere

SA A N D SD s. the level of other airborne contaminants

SA A N D SD t. the noise level

17. Two approaches to establishing a regulatory program over mining in Virginia involve either establishing detailed standards governing mine operations by law in the Code of Virginia, or establishing detailed standards by regulations in accordance with the Administrative Process Act.

SA A N D SD a. Continuation of detailed standards in the Virginia Mine Safety Law will enhance mine safety.

SA A N D SD b. Establishment of detailed regulations governing mine safety is better accomplished by setting regulations through an administrative process.

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B. Issues for Future Discussion

SA A N D SD 1. Virginia should continue to conduct mine safety inspections even if the inspections duplicate federal inspections.

2. Virginia should perform inspections on a schedule as follows:

SA A N D SD a. unannounced spot inspections

SA A N D SD b. more frequently than quarterly in underground mines and semi-annually on surface mines

SA A N D SD c. quarterly in underground mines and semi-annually on surface mines as currently required

SA A N D SD d. less frequently than quarterly in underground mines and semi-annually on surface mines

SA A N D SD e. more frequently in mines with a high rate of violations/accidents/serious injuries.

SA A N D SD 3. Provision of on-site job safety analysis services in mines would improve mine safety.

SA A N D SD 4. The identity of a person making a complaint for violations of the Virginia Mine Safety Law should be held confidential.

5. Mine safety would be improved by provision of additional technical assistance in the following areas:

SA A N D SD a. ventilation
SA A N D SD b. roof control
SA A N D SD c. electrical

6. Mine workers ability to work safely would improve with additional training in the following areas:

SA A N D SD a. certification
SA A N D SD b. job performance
SA A N D SD c. safety
SA A N D SD d. continuing education
SA A N D SD e. new miner

SA A N D SD 7. The additional costs of additional mine safety services should be paid by fees on operators and users of state mine safety services.

SA A N D SD 8. The certification program should be administered as part of the mine safety program based on standards for certification set by an independent board.

SA A N D SD 9. A state program for mine equipment testing and evaluation would improve the safe operation of mines.

10. Accidents, as defined under the Virginia Mine Safety Law, includes traumatic injuries and does not include other injuries. Accidents should be:

SA A N D SD a. broadly defined in the law
SA A N D SD b. always reported to the state, regardless of severity
SA A N D SD c. always investigated by the state, regardless of severity
SA A N D SD d. traced to determine rates and causes so requirements for mine safety program actions can be based on their frequency

11. Standards governing occupational injuries under the Virginia Mine Safety Law should be:

SA (A) N D SD	a. defined in the law
SA (A) N D SD	b. always reported to the state, regardless of severity
SA A N (D) SD	c. always investigated by the state, regardless of severity
SA (A) N D SD	d. traced to determine rates and causes so requirements for mine safety program actions can be based on their frequency

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C. Background Information on Respondents

The subcommittee is interested in receiving comments from all those concerned with mine safety. Please check the description that best represents your interest and experience.

1. Industry experience

87	a. in the mineral mining industry
95	b. in the coal mining industry

2. Years of experience

13	a. 0 - 5 years experience
21	b. 6 - 10 years experience
75	c. 11 - 20 years experience
64	d. 21+ years experience

3. Position

28	a. coal mine operator
36	b. mineral mine operator
44	c. coal miner
25	d. mineral miner
39	e. mine inspector or specialist
4	f. consultant
3	g. private citizen
5	h. trade association representative
0	i. public interest group
28	j. other (specify): _____

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Appendix 19

In accordance with guidelines of the Virginia Division of Legislative Automated Systems for the reprinting of lengthy bills as attachments to reports, Senate Bill 200, which contains 96 pages, is not duplicated in this report. Senate Bill 200 is available in the Bill Room located in the basement of the General Assembly Building, 910 Capitol Street, Richmond, Virginia 23219. The telephone number for the Bill Room is 804/786-6984.

Senate Bill 200, as passed by the Senate and House of Delegates and signed by Governor Allen, is enacted as Chapter 28 of the 1994 Acts of Assembly.

Appendix 20: Policy Recommendations From Decision Brief Process

The changes to the Mine Safety Law recommended by the Joint Subcommittee through the "decision brief" process are summarized in the left column. The corresponding provisions of the proposed Mine Safety Act are listed in the right column.

Decision Brief Description	Location
July 13 - Construction of the Law: Types of Mining: V. Establish four sets of standards, one governing underground coal mines, one governing surface coal mines, one governing underground mineral mines, and one governing surface mineral mines.	Chapters 14.2 through 14.6 of Title 45.1
August 30 - Extent of the Coverage: Coal Mining: For surface coal mining, comprehensive safety only; for underground coal mining, comprehensive safety and limited health.	Chapter 14.3 and Chapter 14.4
- Extent of the Coverage: Mineral Mining: For surface mineral mining, comprehensive safety only; for underground mineral mining, comprehensive safety and limited health.	Chapter 14.5 and Chapter 14.6
- Mandated vs. Voluntary Requirements: Mineral Mining: A. Mine Conditions and Practices - III. Mandate a limited set of mine conditions and practices, with a state inspection program to achieve compliance.	Article 8 of Chapter 14.2, and Chapters 14.5 and 14.6
B. Certification - I. Provide for a state program for issuance of certificate.	Article 4 of Chapter 14.2

C. Training - IV. Rely on federal training requirements, with state provided training to assist operators and miners achieve compliance.	Article 11 of Chapter 14.2
- Mandated vs. Voluntary Requirements: Coal Mining: A. Mine Conditions and Practices - III. Mandate a limited set of mine conditions and practices, with a state inspection program to achieve compliance.	Article 8 of Chapter 14.2, and Chapter 14.3 and 14.4
B. Certification - I. Provide for a state program for issuance of certificates.	Article 3 of Chapter 14.2
C. Training - IV. Rely on federal training requirements, with state provided training to assist operators and miners achieve compliance.	Article 11 of Chapter 14.2
- Statutory Structure: Mineral Mining: II. Establish some prescriptive standards in law and delegate authority to promulgate regulations where no prescriptive standards are established.	Chapter 14.5 and 14.6 (with change to put most standards in regulation)
- Statutory Structure: Mineral Mining: II. Establish some prescriptive standards in law and delegate authority to promulgate regulations where no prescriptive standards are established.	Chapter 14.3 and 14.4
- Penalties for Law Violation: Mineral Mining: A. Types of Penalties: Current system (criminal sanctions, closure orders and injunctions)	§§ 45.1-161.91, 45.1-161.93 and 45.1-161.94

B. Liability: III. Establish liability for operator, individual, or both, depending on provision.	§ 45.1-161.14.B
- Penalties for Law Violation: Coal Mining: A. Types of Penalties: Current system (criminal sanctions, closure orders and injunctions)	§§ 45.1-161.91, 45.1-161.93 and 45.1-161.94
B. Liability: III. Establish liability for operator, individual, or both, depending on provision.	§ 45.1-161.14.B
September 29 - Definition of a Mine: Underground Mineral Mine: A. Showed the definition of a mine be distinguished by the type of operation, type of activity being conducted, or both?-II, III, IV, and VI: all areas being used to prepare a site for mineral extraction activities, all areas being used for mineral extraction activities, inactive mines, areas only through the time initial reclamation activities are completed.	§ 45.1-161.8 ("Underground Mineral Mine")
B. Should the definition be based on the use of the mining product? - I: Only sites where minerals are produce for commercial use.	§ 45.1-161.8 ("Mine")
C. What areas of the site should be subject to the law, consistent with the type of activities and use of product decision? - I through VI: working force, other active underground areas, inactive areas, shaft and slope construction, land area at the surface at underground facilities, and on-site surface facilities.	§ 45.1-161.8 ("Underground Mineral Mine")

- Definition of a Mine: Surface Mineral Mine: A. I, II, III, IV & VI: Exploratory activities which disturb the surface excluding drilling, areas used to prepare a site for mineral extraction, areas used for mineral extraction, inactive mines, and areas through the time initial reclamation activities are completed.	§ 45.1-161.8 ("Surface mineral mine")
B. I and IV: Include only mines producing mineral products for commercial use, and include the land area being used for mineral extraction only where the mineral is being acquired for its unique characteristics or where processing is required. Exclude government mines.	§ 45.1-161.8 ("Mine" and "Surface mineral mine")
C. Decision tabled (see 12/16 brief)	
- Definition of a Mine: Underground Coal Mine: A. II, III and VI: Areas used to prepare a site for coal extraction, areas for coal extraction activities, through the time initial reclamation activities are completed.	§ 45.1-161.8 ("Underground coal mine")
B. I. Include only sites where coal is produced for commercial use.	§ 45.1-161.8 ("Mine")
C. I, II, IV, V, VI (without offices) and VII: The working face, other active underground areas, shift and slope construction, land area and the surface at underground facilities, on-site surface facilities (excluding office), and areas used for the drilling of vertical ventilation holes; Discussion of III (inactive areas) tabled.	§ 45.1-161.8 ("Underground coal mine")

	- Definition of a Mine: Surface Coal Mine: A. II, III and VI: Areas used to prepare a site for coal extraction, areas used for coal extraction activities, through the time initial reclamation activities are completed.	§ 45.1-161.8 ("Surface coal mine")
	B. I: Include only sites where coal is produced for commercial use. Exclude government mines.	§ 45.1-161.8 ("Mine")
	C. I, II, and IV (without offices): the place where the workers extract coal, other active areas of the mine, and on-site surface facilities (excluding offices); Discussion of III (inactive areas) and V (off-site surface facilities) tabled (see 12/16 brief).	§ 45.1-161.8 ("Surface coal mine")
October 6-	Licensing Provisions: Coal Mining (identical for Mineral Mining): A. Purpose of mine license: I. To apply a set of legal requirements and set a fee as a condition for the right to undertake mining.	§§ 45.1-161.60 and 45.1-161.58
	B. What should mine license cover? II. Maintain mine-specific licenses.	§ 45.1-161.57
	B(2nd). What types of information should be required in license application? I, II, III and IV: Current administrative information, annual map, annual report requirements; information regarding persons with overall business responsibility for the operation; information regarding key personnel and emergency contacts; information necessary to make risk assessments.	§ 45.1-161.59

C. Under what circumstances should licenses be revoked or denied? II. A pattern of willful violations of the law that result in an imminent dangers.	§ 45.1-161.60.A
D. Who has authority to revoke or deny licenses, and how should such decisions be appealed? II. By Chief, with appeal directly to court.	§ 45.1-161.60.B
E. What types of fees should be established? I. Maintain an annual license fee.	§ 45.1-161.58
F. How much should the fees be? I. Maintain the current fee.	§ 45.1-161.58
- Inspection Provisions: Coal Mining: A. Should there be a minimum number of inspections, and should inspection frequency be based upon an evaluation of risks? - The minimum number of required complete inspections of mines will be reduced to one-half the number currently required, and additional spot inspections for each mine will be based on an evaluation of risk for each mine.	§ 45.1-161.81.A
B. How should risks be evaluated? IV. Develop an integrated risk assessment measure (see 12/16 brief)	§ 45.1-161.82
C. How should inspections be coordinated with MSHA? II. Inspections should be coordinated to maximize coverage, i.e., in-between MSHA inspections.	§ 45.1-161.85.A

D. How should inspection information be shared between DMME and MSHA? I and II. State mine inspectors should review the last federal inspection reports prior to their inspections, and should share the results of their inspections with MSHA.	§§ 45.1-161.83 and 45.1-161.89.C
E. How comprehensive should the review of mine records during inspections be? II. The most recent mine records should be comprehensively reviewed.	§ 45.1-161.83
F. How should mine operators be required to provide inspectors with transportation to the working face? II. Require operators to provide transportation in a reasonable amount of time.	§ 45.1-161.87.B
- Inspection Provisions: Mineral Mining: A. (Surface) - No inspections of mines inspected by MSHA, to be determined by a "joint committee of cooperation"; those mines not inspected by MSHA would be inspected by the state at one-half the current number, with additional spot inspections based on an evaluation of risk. A. (Underground) - The minimum number of required complete inspections will be reduced to one-half the number currently required, and additional spot inspections for each mine will be based on an evaluation of risk for each mine.	§ 45.1-161.81.B
B. (Surface and Underground) IV. Develop an integrated risk assessment measure (see 12/16 brief)	§ 45.1-161.82

C. (Underground only) II. Inspections should be coordinated to maximize coverage, i.e., in-between MSHA inspections.	§ 45.1-161.85.A
D. (Underground only) I and II. State mine inspections should review the last federal inspection reports prior to their inspections, and should share the results of their inspections with MSHA.	§§ 45.1-161.83 and 45.1-161.89.C
E. (Surface and Underground) II. The most recent mine records should be comprehensively reviewed.	§ 45.1-161.83
F. (Underground only) II. Require operators to provide transportation in a reasonable amount of time.	§ 45.1-161.87.B
- Complaints: A. Reporting complaints to DMME: I. Make complaints to DMME by phone at DMME offices or at inspector's homes, in person at DMME office, or in person to inspectors.	§ 45.1-161.97.A
B. Notifying miners about the complaint process: I & IV. Require operators to provide a copy of the mine safety law to all new miners, including sections on complaint process, and post complaint number in readily available location at all mines.	§ 45.1-161.97.B & C
C. Protecting persons including complaints, etc. from discrimination, and protecting operators from frivolous complaints: II. Protect the confidentiality of persons making complaints, but give a copy of the complaint to the operator.	§ 45.1-161.97.D

October 27	- Persons Responsible Under the Mines Safety Law: Define operator, agent, and miner based on the definitions in the federal mine safety law.	§ 45.1-161.8
	- Civil Enforcement: Mineral Mining (same results for Coal): A. What actions will result in issuance of notices of violations or orders of closure? I, II, III, IV, & V (except during pendency of appeal). NOV upon violation of law or regulation, CO upon imminent or serious danger, CO to preserve accident scene, CO for mining without a license, and CO for non-compliance with NOV.	§§ 45.1-161.90.A, 45.1-161.91.A and 45.1-161.92
	B. Under what conditions are NOVs and COs to be vacated? I. Issue notice of correction for NOV or CO upon finding of compliance with law or regulation, also, vacate NOV or CO if issuance found to be improper.	§§ 45.1-161.90.C & E, 45.1-161.91.C & E
	C. Under what conditions may DMME apply for, and a court issue, an injunction? I and III. To compel compliance with a specific law or regulation as set out in a NOV or CO after an operator has failed to correct the violation, and to prohibit continued operation of a mine or mines subject to the order.	§ 45.1-161.93

D. Under what terms may DMME apply for, and a court grant, an injunction to prohibit continued operation of a mine or mines by persons subject to the order II & III. A finding that compliance with the law will not be maintained as evidenced by a history of non-compliance with the law at the mine or mines of the person subject to the order, or as evidenced by a history of closure orders being issued in the mine or mines operated by the person subject to the order.	§ 45.1-161.93.C
- <u>Appeals of Administrative Enforcement Decisions: Mineral Mining (same results for Coal):</u> A. Should decisions of agency personnel to take civil enforcement actions be subject to administrative review? II & III. Provide for administrative review of NOVs, but provide for immediate judicial review of COs.	§§ 45.1-161.90D and 45.1-161.91D
B. What should be the procedure for administrative review of enforcement decisions of agency personnel? II. Provide for appeal of decisions of inspectors to issue NOVs in accordance with the informal and formal hearings procedure under the APA.	§ 45.1-161.90D
C. What should be the decision-maker for informal conferences or formal hearings held to appeal case decisions? I and II. Informal conferences to be heard by the head of Division; formal hearings to be presided over by hearing officer, subject to decision of Director.	§ 45.1-161.90D

D. What should be the scope of judicial review of an agency decision? For appeals for NOVs, will be consistent with APA; for appeals of COs, will be of both laws and fact.	§§ 45.1-161.90D and 45.1-161.91D
- Certification. A. Who should be responsible for the certification program? II. Two independent boards, one for coal and one for minerals.	§§ 45.1-161.24 and 45.1-161.42
B. Who should be members? I and III. Include miners and operators, and the Chief or Division Director. (Minerals to have 6 members - 4 surface, 2 underground)	§§ 45.1-161.24 and 45.1-161.42
C. Should types of certification and minimum qualifications be defined by code, by regulation, or both? III. A combination of law and regulation.	§§ 45.1-161.28, 45.1-161.29, 45.1-161.46 and 45.1-161.47
D. If set by law which certification should be included? Coal: All existing certifications except fire boss, section foreman, maintenance foreman, and repairman, plus a new general miner certification, plus new categories by regulation. Minerals: 5 current certificates, plus underground blaster for mineral mining, plus a general miner certification.	§§ 45.1-161.28 and 45.1-161.46
E. Should certificates be issued for a specific period of time, after which they expire or must be renewed? Coal - II. Issued for life of miner. Minerals - I. Issued for 5 years (except general miner certificate for life).	§§ 45.1-161.29.B and 45.1-161.47.B

F. If certificates are to be reviewed, what requirements should be established for renewal? Coal: I and III. Requirements should be established for continuing education to maintain a certification, and for information needed for renewal should be established. Mineral: II and III. Requirements should be established for retesting to review a certification, and for information needed for renewal.	§§ 45.1-161.34.A and 45.1-161.52
G. What reciprocity requirements should be set to ensure miners are adequately trained and knowledgeable about mining operations in Virginia? IV. Miners certified in other states are accepted automatically if the state the certified miners comes from accepts miners certified in Virginia and the requirements are substantially equivalent.	§§ 45.1-161.33 and 45.1-161.51
H. What fees should be set for certification (initial and renewal)? II. Maintain the current fee requirements in the law.	§§ 45.1-161.31, 45.1-161.49, 45.1-161.52
I. Should standards for revocation be established by code, by regulation, or by a mixture of both? I. Through law.	§§ 45.1-161.35.A and 45.1-161.53.A
J. Who may bring issues to the governing body and what body should be responsible for responding to these issues? I, II and III. Miners, operators, and agency personnel may bring matters before the governing body.	§§ 45.1-161.35.B and 45.1-161.53.B

November 23 - Virginia Mine Safety Board. A. Should a mine safety board or an advisory committee address coal mining, mineral mining, or both? I. the board or committee should only address coal mining.	§ 45.1-161.100
B. What should the role of a mine safety board or advisory committee be? II and III. Serve as the regulatory working ground for the development of regulations not under the jurisdiction of the Board of Examiners, and provide general advice and recommendations on ways to increase health and safety for miners.	§ 45.1-161.100
C. Should the functions be undertaken by a board or an advisory committee? II. A board.	§ 45.1-161.98
D. How should the membership of the board be composed? I. Representatives of selected interest groups (current arrangement).	§ 45.1-161.98
- Training. A. How should the state assist with the new miner or refresher training required by MSHA? VI. Use state employees to develop a voluntary state approved curriculum or teaching materials and to provide training paid from funds provided to it. The Department may charge reasonable fees not to exceed the cost of providing such services.	§ 45.1-161.102
B. N/A	
C. N/A	

	D. How should the state assist in providing additional training and services related to safety awareness or safe performance of tasks? Coal: I and IV. Provide voluntary on-site safety awareness training as part of inspections, and provide intensive job safety analysis at small mines. Mineral: I and II. Provide voluntary on-site safety awareness training as a part of inspection, and provide general safety talks.	§§ 45.1-161.103 and 45.1-161.104
December 16 -	Mine Risk Assessment. A. What factors should be taken when assessing the risk potential of a mine? III. Provide general authorization in law and require agency to develop an assessment methodology (by policy, not regulation), with the assistance of working groups.	§ 45.1-161.82
	- Definition of a Mine: On-Site, Off-Site, and Load Out Facilities - Mineral Mining. I. Define a surface mineral mine to include on-site surface facilities, but exclude offices. (Do not include off-site surface facilities.)	§ 45.1-161.8 ("Surface mineral mine")
	- Definition of a Mine: On-Site, Off-Site, and Load Out Facilities - Coal Mining. I. Define a surface coal mine to include on-site surface facilities, but exclude offices.	§ 45.1-161.8 ("Surface coal mine")
January 6 -	Criminal Penalties. A. What is the appropriate criminal sanction for a violation of the mine safety law? As under current law, willful violations are a Class 1 misdemeanor unless otherwise specified.	§ 45.1-161.94

B. Should willfulness be a requirement for a criminal violation? I. Only violations which are willful will constitute a criminal offense.	§ 45.1-161.94
C. Should criminal penalties other than imprisonment be imposed on violators who are corporation or other non-individual entities? I. The criminal penalties imposed on non-individuals will be the same as for individuals.	§ 45.1-161.94
D. Should the Department have the ability to obtain administrative search warrants to aid in the enforcement of the law? I. the Department will not have the express right to obtain search warrants.	
E. Should the Office of the Attorney General be authorized to initiate criminal prosecutions where the local Commonwealth's Attorney has declined to act? II (Amended). Require Commonwealth's Attorney to institute proceedings for any violation reported by the Department; if he declines to act, the Director or the Chief may request the Attorney General to institute proceedings, which shall not preclude the Director or Chief from pursuing other applicable statutory procedures.	§ 45.1-161.95

Appendix 21

STATE BY STATE COMPARISON OF MINE LICENSING FEES

	Coal	Mineral	Licensing Fee		Annual Fee	TOTAL
Units	400	482				
Fee			$75		$75	
VA Coal	400		$75			$ 30,000
VA Mineral	482		$75			$ 36,150
KY Coal	Each Seam - Surface		$300 + $100/100,000 tons		Same	
	Deep		$300 + $100/w/section		Same	$160,000
KY Mineral	Covered in mineral mining fee					
PA Coal			$1,000 - 300,000+ tons			
			$ 500 - 300,000 tons			(Est-400)
			$ 50 - 200,000 tons		Same	$200,000
PA Mineral			$ 500 - 2,000+ tons			(Est-482)
			$ 50 - 2,000 tons		Same	$241,000
OH Coal	Issues ID#		$ 0		$ 0	$0
OH Mineral	But have no Fee		$ 0		$ 0	$0
WV Coal			$10		$ 0	$ 4,000
WV Mineral			$10		$ 0	$ 4,820
IL Coal						
IL Mineral						
TN Coal			$500	Underground	$500	(Est-200)
			$250	Surface	$250	(Est-200)
						$150,000
TN Mineral	Does not license		$500	Underground	$500	
	sand and gravel		$250	Surface	$250	$120,500

Appendix 22

COMMONWEALTH OF VIRGINIA
HOUSE OF DELEGATES
RICHMOND

ALSON H. SMITH, JR.
P.O. BOX 422
WINCHESTER, VIRGINIA 22604

TWENTY-NINTH DISTRICT

COMMITTEE ASSIGNMENTS:
MINING AND MINERAL RESOURCES (CHAIRMAN)
APPROPRIATIONS
CORPORATIONS, INSURANCE AND BANKING
RULES

November 30, 1993

The Honorable Lawrence Douglas Wilder
Governor
Capitol Building
Richmond, Virginia 23219

Dear Governor Wilder:

The joint subcommittee studying the Mine Safety Law of 1966 pursuant to House Joint Resolution 645 is in the process of developing recommendations to improve the mine safety laws of the Commonwealth. I am honored to serve as chairman of the joint subcommittee. In the course of its work, the members have been advised by all interested groups that training and education are critical elements of an effective mine safety program.

The Division of Mines of the Department of Mines, Minerals and Energy had implemented a small mine "topic of the month" safety training program, which was well received by the coal industry. Unfortunately, state funding for this program was eliminated when the Commonwealth suffered revenue shortfalls in the 1990-92 biennium. At the time of its cessation, the training program's cost was approximately $260,000 annually.

At its meeting on November 23, 1993, the members of the joint subcommittee unanimously approved an interim recommendation requesting that you include in the proposed budget for the 1994-96 biennium a sum sufficient for DMME to reinstitute the "topic of the month" mining safety program for unsafe mines.

On behalf of all members of the joint subcommittee, I urge you to include an appropriation for this purpose in the budget to be presented on December 20. I have been advised the the DMME had included a request for this purpose in its proposal submitted during the summer. Reestablishing this safety training program may help the Commonwealth avoid such terrible tragedies as the

Southmountain Coal Co. Mine #3 explosion that occurred last December 7, in which eight miners died.

Your consideration of this request is appreciated.

Very truly yours,

/s/

Alson H. Smith, Jr.
Member, House of Delegates

cc: Senator Jackson E. Reasor, Jr., *Vice Chairman*
Delegate Clarence E. Phillips
Delegate Jackie T. Stump
Delegate William K. Barlow
Delegate Frank D. Hargrove, Sr.
Senator Robert E. Russell
Senator William C. Wampler, Jr.
Senator Thomas K. Norment, Jr.
John H. Bauhan
Frank Cone
W. Thomas Hudson
Donnie L. Lowe

AHS, Jr./fdm

Appendix 23

1/27/94

COMPARATIVE TABLES

NEW MINE SAFETY ACT	OLD MINE SAFETY LAW
Chapter 14.1- Administration	
§ 45.1-161.1	§ 45.1-1.2
45.1-161.2	45.1-1.1
45.1-161.3	45.1-1.3
45.1-161.4	45.1-1.4
45.1-161.5	45.1-1.5
45.1-161.6	45.1-1.9
Chapter 14.2- Mine Safety Act **Article 1- General Provisions**	
45.1-161.7	45.1-1.10
45.1-161.8	45.1-2
45.1-161.9	45.1-1.7
45.1-161.10	45.1-31
45.1-161.11	45.1-32
45.1-161.12	45.1-26
45.1-161.13	45.1-21.H
45.1-161.14	45.1-21.I
	45.1-21.F
	45.1-104.A
	45.1-30
Article 2- Chief, Director, and mine inspectors	
45.1-161.15	45.1-3
45.1-161.16	45.1-4
45.1-161.17	45.1-4
45.1-161.18	45.1-3
45.1-161.19	45.1-4
45.1-161.20	45.1-4
45.1-161.21	45.1-3
	45.1-4
45.1-161.22	Added
45.1-161.23	45.1-4

Article 3- Certification of Coal Mine Workers

45.1-161.24	45.1-7(a) & (b)
45.1-161.25	45.1-10
45.1-161.26	45.1-11
45.1-161.27	45.1-7(c)
45.1-161.28	45.1-12
	45.1-14
45.1-161.29	45.1-12
45.1-161.30	45.1-12.1
45.1-161.31	45.1-8
	45.1-9
45.1-161.32	45.1-13
45.1-161.33	45.1-14
45.1-161.34	Added
45.1-161.35	45.1-13
45.1-161.36	45.1-13
45.1-161.37	Added
45.1-161.38	45.1-21.E
	45.1-13
	45.1-14
	45.1-15
	45.1-101.2.B
45.1-161.39	45.1-12(d)
45.1-161.40	45.1-12(c)
45.1-161.41	45.1-20.1

Article 4- Certification of Mineral Mine Workers

45.1-161.42	45.1-7
45.1-161.43	45.1-10
45.1-161.44	45.1-11
45.1-161.45	45.1-7
45.1-161.46	45.1-12
45.1-161.47	45.1-12
45.1-161.48	45.1-12.1
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45.1-161.50	45.1-13
45.1-161.51	45.1-14
45.1-161.52	Added
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45.1-161.58	45.1-23
45.1-161.59	Added
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45.1-161.61	45.1-25
45.1-161.62	45.1-21.L
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45.1-161.82	Added
45.1-161.83	Added
45.1-161.84	40.1-51.3:1
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45.1-161.85	Added
45.1-161.86	45.1-105(b1)
45.1-161.87	45.1-21.A
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45.1-161.89	45.1-5

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45.1-161.92	Added
45.1-161.93	45.1-104.C
45.1-161.94	45.1-105(b)
45.1-161.95	45.1-105(c)
45.1-161.96	Added
45.1-161.97	Added

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45.1-161.99	45.1-5.3.A
45.1-161.100	45.1-5.3.B

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45.1-161.102	Added
45.1-161.103	Added
45.1-161.104	Added

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45.1-161.107	45.1-104

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45.1-161.109	45.1-40(a), (b), and (c)
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45.1-161.111	45.1-40(b1)
45.1-161.112	45.1-40(d)
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45.1-161.113	45.1-43
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45.1-161.114	45.1-41.D
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45.1-161.117	45.1-42(d)
45.1-161.118	45.1-41.G & H
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45.1-161.122	45.1-93

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45.1-161.130	45.1-49
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45.1-161.135.A	45.1-71(a)
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45.1-161.139	45.1-85.A
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45.1-161.141.A	45.1-72(b)
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45.1-161.147.A	45.1-73(i)
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.F	45.1-73(v)
45.1-161.148	45.1-73(u)
45.1-161.149	Added
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45.1-161.151	45.1-74(g)-(h)
45.1-161.152	45.1-74(i)-(m)

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45.1-161.153.A	45.1-68(b)
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45.1-161.154.A	45.1-68(g)
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45.1-161.159.A	45.1-68(a)
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45.1-161.160.A	45.1-69(e)
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Article 8- Mine Openings and Escapeways

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	45.1-95.C
.B	45.1-95.C
.C	45.1-94(a)
.D	Added
45.1-161.163	45.1-94(a)
45.1-161.164	45.1-94(a)
45.1-161.165	45.1-94(b)
45.1-161.166.A	45.1-94(b)
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45.1-161.168	45.1-95.D
45.1-161.169	45.1-95.A & .B
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45.1-161.175	45.1-99
45.1-161.176	45.1-99.1
45.1-161.177	45.1-98.1
45.1-161.178	45.1-98.3
45.1-161.179	45.1-98.2
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	45.1-39(c)

Article 11- Electricity

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45.1-161.182	45.1-76.A & .B
45.1-161.183	45.1-76.C
45.1-161.184	45.1-76.F & .G
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45.1-161.185	45.1-77(a) & (c)
45.1-161.186	45.1-78.A - .G
45.1-161.187	45.1-78.I - .S
45.1-161.188	45.1-79
45.1-161.189	45.1-80(a) - (h)
45.1-161.190	45.1-80(i) - (l)
45.1-161.191	45.1-81
45.1-161.192	45.1-82
45.1-161.193	45.1-83
45.1-161.194	45.1-84
45.1-161.195	45.1-85
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45.1-161.198	45.1-101 (b) & (c)
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Article 13- Fire Prevention and Fire Control

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45.1-161.202	45.1-89.A
	Added
45.1-161.203	45.1-89.A
45.1-161.204	45.1-89.B
45.1-161.205	45.1-89.B
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45.1-161.206	45.1-90(b)
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	45.1-20(a),(c),(e),(f) & (g)
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	45.1-20(i) & (j)
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45.1-161.211	45.1-54.E
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45.1-161.212	45.1-65(e)
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45.1-161.215	45.1-65.2
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45.1-161.219	45.1-56.A & .B
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45.1-161.220	45.1-56.E
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45.1-161.222	45.1-58
45.1-161.223	45.1-59(a) - (d)
45.1-161.224	45.1-59(e) - (g)
45.1-161.225	45.1-60
45.1-161.226	45.1-61
45.1-161.227	45.1-62.D
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45.1-161.229	45.1-63
45.1-161.230	45.1-64
45.1-161.231	45.1-65(a)
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45.1-161.232	45.1-65.1
45.1-161.233	45.1-30.1
45.1-161.234	45.1-66
45.1-161.235	45.1-67

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	45.1-34(e)
45.1-161.237	45.1-38
45.1-161.238	45.1-39
45.1-161.239	45.1-36
45.1-161.240	45.1-34(a) & (b)
	45.1-67(d)
45.1-161.241	45.1-34(c)
45.1-161.242	45.1-34(d)
45.1-161.243	45.1-89.A
45.1-161.244	Added
45.1-161.245	Added
45.1-161.246	Added
45.1-161.247	Added
45.1-161.248	Added

Article 16- Additional duties of certified persons and other miners

45.1-161.249	45.1-17.A & .B
45.1-161.250	45.1-20.1
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45.1-161.252	45.1-21.K

Chapter 14.4- Requirements Applicable to Surface Coal Mines

Article 1- General provisions

45.1-161.253	Added
45.1-161.254	45.1-104
45.1-161.255	45.1-104

Article 2- Work area examinations, record keeping, and reporting

45.1-161.256	45.1-20(j)
	45.1-42(b), (c)
	45.1-65(d), (f), (g)
45.1-161.257	45.1-20(h)
	45.1-42(b), (c)
	45.1-65(k), (j)
	45.1-224(c)
45.1-161.258	45.1-17.D
	45.1-21.C, .D
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Article 3- Personal protection

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	45.1-26(a)
45.1-161.260	45.1-37
45.1-161.261	45.1-34(e)

Article 4- First-aid equipment; medical care; emergency medical services personnel

45.1-161.262	45.1-101(a)
45.1-161.263	45.1-101.2.B & C
45.1-161.264	45.1-101 (b) & (c)

Article 5- Fire prevention and fire control

45.1-161.265	45.1-89.A
45.1-161.266	45.1-89.A
45.1-161.267	45.1-39

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45.1-161.268	45.1-71(g) 45.1-72(a) 45.1-73(l) & (q) 45.1-74(b), (c), & (f)
45.1-161.269	Added (Regulations)
45.1-161.270	45.1-73 (b) & (q)
45.1-161.271	Added (Regulations)
45.1-161.272	45.1-38(a) & (b)
45.1-161.273	45.1-88
45.1-161.274	45.1-88.1

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45.1-161.275	45.1-36(a), (b) & (c)
45.1-161.276	45.1-36
45.1-161.277	Added-Surface Foreman's Guide

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45.1-161.279	45.1-75(a), (b) & (c)
45.1-161.280	45.1-76(a), (b), (e) & (g) 45.1-78.H
45.1-161.281	45.1-79
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45.1-161.283	45.1-84.C- .F

Article 10- Explosives and blasting

45.1-161.284	45.1-44(a), (b), (e) (g)-(j)
45.1-161.285	45.1-50
45.1-161.286	45.1-53.1.B 45.1-48

Article 11- Ground control

45.1-161.287	Added (regulations)

Article 12- Auger, highwall and thin seam mining

45.1-161.288	45.1-85
45.1-161.289	Added (regulations)
45.1-161.290	Added (regulations)
45.1-161.291	Added (regulations)

Article 13- Proximity of mining to gas, oil wells and vertical ventilation holes

45.1-161.292	45.1-92.1

Chapter 14.5- Requirements Applicable to Underground Mineral Mines

45.1-161.293	Added
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45.1-161.295	Added (45.1-33)
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45.1-161.297	45.1-64
45.1-161.298	45.1-74(b), (e), & (f)
45.1-161.299	45.1-78.B
45.1-161.300	45.1-78.G
45.1-161.301	45.1-80(c)
45.1-161.302	45.1-99(g) 45.1-99.1.B
45.1-161.303	45.1-89.B

Chapter 14.6- Requirements Applicable to Surface Mineral Mines

45.1-161.304	Added
45.1-161.305	Added (45.1-33)
45.1-161.306	Added (45.1-33)
45.1-161.307	45.1-92.1
45.1-161.308	45.1-99(g)
45.1-161.309	Added (Regs, 5.3 & 5.6)

Chapter 14.7-Rights of Adjacent Owners

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45.1-161.311	45.1-103

Chapter 14.8- Emergency Seizure of Coal Properties by Commonwealth

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45.1-161.313	45.1-146
45.1-161.314	45.1-147
45.1-161.315	45.1-148
45.1-161.316	45.1-149
45.1-161.317	45.1-156
45.1-161.318	45.1-154
45.1-161.319	45.1-150
45.1-161.320	45.1-151
45.1-161.321	45.1-152
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Article 1- Department of Mines, Minerals and Energy		
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45.1-1.2		45.1-161.1
45.1-1.3		45.1-161.3
45.1-1.4		45.1-161.4
45.1-1.5		45.1-161.5
45.1-1.6		Deleted
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45.1-1.9		45.1-161.6
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45.1-2		45.1-161.8
45.1-3		45.1-161.15
45.1-4		45.1-161.16
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45.1-5.3		45.1-161.99
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45.1-6		45.1-161.77
45.1-7		45.1-161.24
45.1-8		45.1-161.31
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45.1-16	45.1-161.38
45.1-17	45.1-161.210
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	45.1-161.214
	45.1-161.249
	45.1-161.251
	45.1-161.258
45.1-18	Deleted
45.1-19	Deleted
45.1-20	45.1-161.171
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	45.1-161.213
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	45.1-161.256
45.1-20.1	45.1-161.41
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45.1-20.2	Deleted
45.1-21	45.1-161.87
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	45.1-161.62
	45.1-161.59
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45.1-22	45.1-161.57
45.1-22.1	45.1-161.60
45.1-23	45.1-161.58
45.1-24	45.1-161.59
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45.1-26	45.1-161.12
45.1-27	45.1-161.64
45.1-28	45.1-161.65

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45.1-30.1	45.1-161.233
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45.1-33.3	45.1-161.70
45.1-33.4	45.1-161.71
45.1-33.5	45.1-161.72
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45.1-33.5:2	45.1-161.74
45.1-33.5:3	45.1-161.75
45.1-33.5:4	45.1-161.76

Chapter 2- Surface Structures and Conditions

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45.1-36	45.1-161.239
	45.1-161.275
45.1-37	45.1-161.236
	45.1-161.261
45.1-38	45.1-161.237
	45.1-161.272
45.1-39	45.1-161.180
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