
THE GENERAL ASSEMBLY OF PENNSYLVANIA

SENATE BILL

No. 949 Session of
2008

INTRODUCED BY KASUNIC, MUSTO, M. WHITE, STOUT, A. WILLIAMS,
MELLOW, LAVALLE, COSTA, D. WHITE, BOSCOLA, BAKER, BROWNE,
FOLMER, FONTANA, GORDNER, KITCHEN, LOGAN, MADIGAN, ORIE,
RAFFERTY, STACK, TARTAGLIONE, WASHINGTON, WAUGH, WONDERLING,
WOZNIAK AND REGOLA, JANUARY 11, 2008

SENATE AMENDMENTS TO HOUSE AMENDMENTS, JUNE 29, 2008

AN ACT

1 Providing for bituminous coal mines; and making a repeal.

2 TABLE OF CONTENTS

3 Chapter 1. Preliminary Provisions

4 Section 101. Short title.

5 Section 102. Application.

6 Section 103. Findings and purpose.

7 Section 104. Definitions.

8 Section 105. Powers and duties of department.

9 Section 106. Board of Coal Mine Safety.

10 Section 106.1. Rulemaking.

11 Section 106.2. Emergency shelters and chambers.

12 Section 106.3. Notice to operators and miners.

13 Section 106.4. Standards for surface facilities.

14 SECTION 106.5. TRACK DISTANCE.

15 Section 107. Safety issues.

←

1 Section 108. Inspections.
2 Section 109. Accidents.
3 Section 110. Mine officials' certification.
4 Section 111. Classification of mines as gassy.
5 Section 112. Reports.
6 Section 113. Mine rescue program.
7 Section 114. Direction of mine rescue work.
8 Section 115. Recovery of funds.
9 Section 116. Mine Safety Fund.
10 Section 117. Bituminous mine inspector.
11 Section 118. Bituminous mine electrical inspector.
12 Section 119. Availability of mine maps.
13 Section 120. Mine map repository.
14 Section 121. Applicability.
15 Chapter 2. General Requirements for Underground Bituminous
16 Mines
17 Section 201. General safety requirements.
18 Section 202. Qualifications for certification.
19 Section 203. Emergency use of mine examiner as assistant
20 mine foreman.
21 Section 204. Certification of miners.
22 Section 205. Qualifications for certification as miners.
23 Section 206. Issuance of miners' certificates.
24 Section 207. Certification of mining machine operators
25 and shot-firers.
26 Section 208. Employment of mine foremen.
27 Section 209. Employment of mine electricians.
28 Section 210. Employment of assistant mine foremen.
29 Section 211. Ventilation responsibilities of mine foreman.
30 Section 212. Mine foreman's responsibility for working

1 place safety.

2 Section 213. Mine foreman's responsibilities for blasting.

3 Section 214. Mine foreman's responsibilities for drainage.

4 Section 215. Mine foreman's responsibility for employment of

5 competent persons.

6 Section 216. Mine foreman's responsibilities for inspections

7 and reports.

8 Section 217. Employment of mine examiners.

9 ~~Section 218. Duties of mine examiners.~~ <—

10 SECTION 218. PRESHIFT EXAMINATION AT FIXED INTERVALS. <—

11 SECTION 218.1. SUPPLEMENTAL EXAMINATION.

12 Section 219. Management of mine.

13 Section 220. Duties of superintendent.

14 Section 221. Qualifications and general responsibility of

15 superintendent.

16 Section 222. Danger signs.

17 Section 223. Supply of record books.

18 Section 224. Mapping requirements and surveying standards.

19 Section 225. Availability of copy of map.

20 Section 226. Excavations on map.

21 Section 227. Furnishing copies of maps.

22 Section 228. Duties upon abandonment of mine.

23 Section 229. Survey by department.

24 Section 230. Ventilation requirements.

25 Section 231. Crosscuts and stoppings.

26 Section 232. Overcasts and undercasts.

27 Section 233. Line brattice.

28 Section 234. Auxiliary blowers and fans.

29 Section 235. Unused and abandoned parts of mines.

30 Section 236. Sewage dumping prohibited.

- 1 Section 237. Fans.
- 2 Section 238. Measurement of methane.
- 3 Section 239. Control of coal dust and rock dusting.
- 4 Section 240. Instruction of employees and examination of
- 5 working areas.
- 6 Section 241. Roof support.
- 7 Section 242. Authorized explosives.
- 8 Section 243. (Reserved).
- 9 Section 244. Underground storage of explosives.
- 10 Section 245. Preparation of shots, blasting practices and
- 11 multiple shooting.
- 12 Section 246. Transportation of explosives.
- 13 Section 247. Electrical shot-firing.
- 14 Section 248. General shot-firing rules.
- 15 Section 249. Hoisting equipment and operations.
- 16 Section 250. Bottom person.
- 17 Section 251. Number of individuals to be hoisted.
- 18 Section 252. Top person.
- 19 Section 253. Use of competent hoist operators.
- 20 Section 254. Clearances and shelter holes.
- 21 Section 255. Underground haulage equipment.
- 22 Section 256. Operation of haulage equipment.
- 23 Section 257. Trip rider and bottom individual on rope
- 24 haulage.
- 25 Section 258. Transportation of individuals.
- 26 Section 259. Conveyor belts and conveyor equipment.
- 27 Section 260. Blowtorches and fuel.
- 28 Section 261. Oxygen and gas containers.
- 29 Section 262. Transportation of oxygen and gas.
- 30 Section 263. Storage of oxygen and gas.

- 1 Section 264. Use of oxygen and gas.
- 2 Section 265. Duties of individuals subject to this act.
- 3 Section 266. Protective clothing.
- 4 Section 267. Checking systems.
- 5 Section 268. Prohibitions regarding endangering security of
- 6 mine.
- 7 Section 269. Responsibility for care and maintenance of
- 8 equipment.
- 9 Section 270. Control of dust and other inhalation hazards.
- 10 Section 271. Safeguards for mechanical equipment.
- 11 Section 272. First aid equipment.
- 12 Section 273. Fire protection.
- 13 Section 274. Mine openings or outlets.
- 14 Section 275. Mining close to abandoned workings.
- 15 Section 276. Lubrication and storage of flammable lubricants.
- 16 Section 277. Approved lighting and gas detection devices in
- 17 mines.
- 18 Section 278. Unauthorized entry into mine.
- 19 Section 279. Passing by or removing danger signs.
- 20 Section 280. Miners to remain in work areas.
- 21 Section 281. Sealing openings.
- 22 Section 282. Ladders in mines.
- 23 Section 283. Inside structures to be of incombustible
- 24 materials.
- 25 Section 284. Washhouses.
- 26 Chapter 3. Electrical Equipment
- 27 Section 301. Duties of mine foreman and superintendent.
- 28 Section 302. Definitions.
- 29 Section 303. Plan of electrical system.
- 30 Section 304. Protection against shock.

- 1 Section 305. Restoration from shock.
- 2 Section 306. Report of defective equipment.
- 3 Section 307. Damage or alteration to mine electrical system.
- 4 Section 308. Capacity.
- 5 Section 309. Joints in conductors.
- 6 Section 310. Cables entering fittings.
- 7 Section 311. Switches, fuses and circuit breakers.
- 8 Section 312. Lightning protection.
- 9 Section 313. Underground power supply.
- 10 Section 314. Storage battery equipment.
- 11 Section 315. (Reserved).
- 12 Section 316. Electrical equipment.
- 13 Section 317. Inspection of equipment.
- 14 Section 318. Stationary motors.
- 15 ~~Section 319. Permanent underground installation.~~ <—
- 16 SECTION 319. UNDERGROUND ELECTRICAL INSTALLATIONS. <—
- 17 Section 320. Underground illumination.
- 18 Section 321. Telephones and signaling.
- 19 Section 322. Grounding.
- 20 Section 323. Voltage limitation.
- 21 Section 324. Incoming feeder-disconnect switches.
- 22 Section 325. Bonding.
- 23 Section 326. Trolley installation.
- 24 Section 327. Connections to trolley.
- 25 Section 328. Guarding.
- 26 Section 329. Locomotives.
- 27 Section 330. Outdoor substation.
- 28 Section 331. High-voltage underground transmission system.
- 29 Section 332. Load center.
- 30 Section 333. Distribution centers.

- 1 Section 334. Mandatory safety components of electrical
- 2 equipment.
- 3 Section 335. High-voltage longwalls.
- 4 Section 336. Longwall electrical protection.
- 5 Section 337. Longwall disconnect switches.
- 6 Section 338. Guarding of longwall cables.
- 7 Section 339. Longwall cable-handling and support systems.
- 8 Section 340. Use of longwall insulated cable handling
- 9 equipment.
- 10 Section 341. Maintenance.
- 11 Section 342. High-voltage longwall mining systems.
- 12 Section 343. Longwall electrical work.
- 13 Section 344. Testing, examination and maintenance of longwall
- 14 equipment.
- 15 Section 345. (Reserved).
- 16 Section 346. (Reserved).
- 17 Section 347. (Reserved).
- 18 Section 348. (Reserved).
- 19 Section 349. (Reserved).
- 20 Section 350. Equipment approvals.
- 21 Chapter 4. Diesel-powered Equipment
- 22 Section 401. Underground use.
- 23 Section 402. Diesel-powered equipment package.
- 24 Section 403. Exhaust emissions control.
- 25 Section 404. Ventilation.
- 26 Section 405. Fuel storage facilities.
- 27 Section 406. Transfer of diesel fuel.
- 28 Section 407. Containers.
- 29 Section 408. Fire suppression for equipment and transportation.
- 30 Section 409. Fire suppression for storage areas.

1 Section 410. Use of certain starting aids prohibited.
2 Section 411. Fueling.
3 Section 412. Fire and safety training.
4 Section 413. Maintenance.
5 Section 414. Records.
6 Section 415. Duties of equipment operator.
7 Section 416. Schedule of maintenance.
8 Section 417. Emissions monitoring and control.
9 Section 418. Diagnostic testing.
10 Section 419. Exhaust gas monitoring and control.
11 Section 420. Training and general requirements.
12 Section 421. Equipment-specific training.
13 Section 422. Diesel mechanic training.
14 Section 423. Operation of diesel-powered equipment.
15 Section 424. Technical advisory committee.
16 Chapter 5. Enforcement and Remedies
17 Section 501. Enforcement orders and duty to comply.
18 Section 502. Restraining violations.
19 Section 503. Administrative penalties.
20 SECTION 503.1. PROCESS FOR ASSESSING ADMINISTRATIVE
21 PENALTIES. ←
22 Section 504. Unlawful conduct.
23 Section 505. Criminal penalties.
24 Section 506. Inspections.
25 Section 507. Intervention.
26 Section 508. Limitation of action.
27 Section 509. Relation to permit.
28 Section 510. Certification actions.
29 Section 511. Withdrawal of certification.
30 Chapter 6. Emergency Medical Personnel

- 1 Section 601. Definitions.
- 2 Section 602. Emergency medical personnel.
- 3 Section 603. Regulations for training and certification.
- 4 Section 604. First aid training of mine employees.
- 5 Section 605. Continuing training.
- 6 Section 606. Regulations.
- 7 Section 607. Certification.
- 8 Section 608. Liability.
- 9 Section 609. Equivalent training.
- 10 Chapter 7. Safety Zones
- 11 Section 701. Establishment.
- 12 Section 702. Written authorization.
- 13 Section 703. Pillar recovery.
- 14 Section 704. Proof of rock cover.
- 15 Section 705. Verification.
- 16 Section 706. Approval or disapproval of plans.
- 17 Section 707. Notice.
- 18 Section 708. Entombed workmen.
- 19 Chapter 31. Miscellaneous Provisions
- 20 Section 3101. Repeals.
- 21 Section 3102. Effective date.

22 The General Assembly of the Commonwealth of Pennsylvania
23 hereby enacts as follows:

24 CHAPTER 1
25 PRELIMINARY PROVISIONS

26 Section 101. Short title.

27 This act shall be known and may be cited as the Bituminous
28 Coal Mine Safety Act.

29 Section 102. Application.

30 This act shall apply to all underground bituminous coal mines

1 in this Commonwealth, including all of the following:

2 (1) The construction, operation, maintenance and sealing
3 of underground bituminous coal mines.

4 (2) The operators of underground bituminous coal mines.

5 (3) All individuals at underground bituminous coal
6 mines.

7 Section 103. Findings and purpose.

8 (a) Findings.--The General Assembly finds that it is in the
9 public interest to establish a comprehensive scheme to protect
10 the lives, health and safety of those who work at mines in this
11 Commonwealth. This comprehensive scheme shall address all of the
12 following:

13 (1) The first priority and concern of all in the
14 bituminous coal mining industry must be the health and safety
15 of those who work in and at mines and others in and about
16 mines.

17 (2) Deaths and injuries from unsafe and unhealthful
18 conditions and practices at underground bituminous coal mines
19 cause grief and suffering to miners and their families.

20 (3) The efforts of mine operators, miners and the
21 Commonwealth, through the Department of Environmental
22 Protection, have over time significantly reduced the
23 occurrence of deaths and injuries in the underground
24 bituminous coal mining industry. This reduction in deaths and
25 injuries is due, in part, to the safety standards under the
26 act of July 17, 1961 (P.L.659, No.339), known as the
27 Pennsylvania Bituminous Coal Mine Act, and the grant of
28 authority to the department to approve underground bituminous
29 coal mining activity and equipment.

30 (4) The Pennsylvania Bituminous Coal Mine Act is

1 becoming outdated and lacks an effective mechanism to modify
2 existing standards and to adopt new standards.

3 (5) The Commonwealth must maintain a strong, independent
4 mine safety program.

5 (6) The operators at underground bituminous coal mines,
6 with the assistance of certified miners and mine officials
7 have the primary responsibility to prevent the existence of
8 unsafe and unhealthful conditions at underground bituminous
9 coal mines.

10 (7) Underground bituminous coal mining is highly
11 specialized, technical and complex and requires frequent
12 review, refinement and improvement of standards to protect
13 the health and safety of miners.

14 (8) The formulation of appropriate rules and practices
15 to improve health and safety and to provide increased
16 protection of miners can be accomplished more effectively by
17 individuals who have experience and expertise in underground
18 bituminous coal mining and underground bituminous coal mine
19 health and safety.

20 (9) Mine safety is enhanced through a rigorous program
21 for training and certifying individuals to work at mines in
22 this Commonwealth.

23 (10) It is imperative that the department have the
24 capability to coordinate and assist rescue operations in
25 response to accidents at underground bituminous coal mines.

26 (11) It is in the public interest to encourage the
27 underground bituminous coal mining industry to establish,
28 maintain and support mine rescue teams and other emergency
29 response capabilities.

30 (b) Purpose.--It is the purpose of this act to do all of the

1 following:

2 (1) To use the full extent of the Commonwealth's powers
3 to protect the lives, health and safety of miners and others
4 in and about underground bituminous coal mines.

5 (2) To establish and promulgate improved mandatory
6 health and safety standards to protect the health and safety
7 of miners and others in and about underground coal mines in
8 this Commonwealth.

9 (3) To establish a rulemaking process that enables the
10 expeditious updating of the interim mandatory health and
11 safety standards established under this act and to otherwise
12 protect the health, safety and welfare of miners and others
13 in and about mines.

14 (4) To require that operators at underground bituminous
15 coal mines and every individual at every mine comply with
16 these standards.

17 (5) To improve and expand research, development and
18 training programs aimed at preventing underground bituminous
19 coal mine accidents and occupationally caused diseases in the
20 industry.

21 (6) To enable the Commonwealth to respond as necessary
22 and appropriate to accidents and other emergencies at
23 underground bituminous coal mines.

24 Section 104. Definitions.

25 The following words and phrases when used in this act shall
26 have the meanings given to them in this section unless the
27 context clearly indicates otherwise:

28 "Abandoned workings." Excavations, either caved or sealed,
29 that are deserted and in which further mining is not intended.

30 "Accident." An unanticipated event, including any of the

1 following:

2 (1) A death of an individual at a mine.

3 (2) An injury to an individual at a mine, which has a
4 reasonable potential to cause death.

5 (3) An entrapment of an individual at a mine which has a
6 reasonable potential to cause death or serious injury.

7 (4) An unplanned inundation of a mine by a liquid or
8 gas.

9 (5) An unplanned ignition or explosion of gas or dust.

10 (6) An unplanned mine fire not extinguished within ten
11 minutes of discovery.

12 (7) An unplanned ignition or explosion of a blasting
13 agent or an explosive.

14 (8) An unplanned roof fall at or above the anchorage
15 zone in active workings where roof bolts are in use.

16 (9) An unplanned roof or rib fall in active workings
17 that impairs ventilation or impedes passage.

18 (10) A coal or rock outburst that causes withdrawal of
19 miners or which disrupts regular mining activity for more
20 than one hour.

21 (11) An unstable condition at an impoundment or refuse
22 pile which does any of the following:

23 (i) Requires emergency action in order to prevent
24 failure.

25 (ii) Causes individuals to evacuate an area.

26 (12) Failure of an impoundment or refuse pile.

27 (13) Damage to hoisting equipment in a shaft or slope
28 which endangers an individual or which interferes with use of
29 the equipment for more than 30 minutes.

30 (14) An event at a mine which causes death or bodily

1 injury to an individual not at the mine at the time the event
2 occurs.

3 "Active workings." All areas in a mine that are not sealed
4 and which must be ventilated and examined under this act.

5 "Advisory committee." The Technical Advisory Committee on
6 Diesel-Powered Equipment.

7 "Approval." A written document, issued by the Department of
8 Environmental Protection, which states that a technology,
9 material, machinery, tool, process, plan, device, equipment,
10 facility, method, supply, accessory or other item meets the
11 requirements of this act or of regulations promulgated under
12 this act.

13 "Board." The Board of Coal Mine Safety.

14 "Certified individual." An individual who is qualified under
15 the provisions of this act and who holds a certificate from the
16 Department of Environmental Protection to perform a particular
17 duty in connection with the operation at a mine. The term
18 includes all of the following:

- 19 (1) Mine foreman.
- 20 (2) Assistant mine foreman.
- 21 (3) Mine examiner.
- 22 (4) Mine electrician.
- 23 (5) Machine runner.
- 24 (6) Shot-firer.
- 25 (7) Miner.

26 "Check survey." The term shall have the same meaning as
27 closed-loop survey.

28 "Closed-loop survey." The method of establishing the
29 accuracy of a mine survey by conducting a loop traverse to the
30 point of beginning or to a known point of another closed-loop

1 survey. The term does not include a double angle, double
2 distance survey unless that method is used to complete a closed-
3 loop survey.

4 "Coal-producing shift." A shift primarily intended for coal
5 production rather than for purposes of construction, maintenance
6 and housekeeping even though some coal production may be
7 incident to such purposes.

8 "Department." The Department of Environmental Protection of
9 the Commonwealth.

10 "DPEP." Diesel-powered equipment package.

11 "Face." The solid coal at the inby end of a working place.

12 "Inactive workings." All portions of a mine in which
13 operations have been suspended for an indefinite period, but
14 have not been abandoned.

15 ~~"Individual." Any natural person, partnership, association,~~ ←
16 ~~corporation, firm, subsidiary of a corporation or other~~
17 ~~organization.~~

18 "Interim mandatory safety standards." The safety standards
19 under Chapters 2 and 3.

20 "Lateral and face take-ups." The individual measurements
21 left and right of the entry center line used to depict the
22 physical location of the coal ribs and pillars. The lateral
23 take-ups define the intersections, pillars' corners and the
24 significant variations in all excavations. The face take-ups
25 define the limits of mining in all face areas in advance of the
26 last station spad. Face take-ups and lateral take-ups in the
27 face area are not to exceed a distance greater than 300 feet
28 from the last survey station spad.

29 "Lost-time injury." When an individual is unable to report
30 for work at the individual's regularly scheduled job on the

1 individual's next regularly scheduled work shift due to a work-
2 related injury.

3 "Mine." The shafts, slopes or drifts of an underground
4 bituminous coal mine, either under construction, in use or
5 abandoned, connected with excavations penetrating or intended to
6 penetrate coal stratum or strata, which excavations are or were
7 ventilated by air currents and connected by a method of
8 transportation over which coal may be or was delivered to one or
9 more points outside the mine. The term shall not include any
10 surface coal mine.

11 "Mine examiner." An individual designated by the mine
12 foreman or superintendent to examine a mine for gas and other
13 dangers. The term shall include the title "fire boss."

14 "Mine foreman." An individual appointed by an operator or
15 superintendent to be in charge of all of the following:

- 16 (1) The inside workings of a mine.
- 17 (2) An individual in a mine.
- 18 (3) A visitor to the inside of a mine, except for
19 Federal and State Government representatives, mine inspectors
20 and other representatives.

21 "Mine official." Any of the following:

- 22 (1) Superintendent.
- 23 (2) Mine foreman.
- 24 (3) Assistant mine foreman.
- 25 (4) Mine examiner.
- 26 (5) Mine electrician.

27 "Miner." An individual who is certified by the Department of
28 Environmental Protection to work in an underground mine.

29 "MSHA." The Mine Safety and Health Administration within the
30 United States Department of Labor.

1 "NIOSH." The National Institute for Occupational Safety and
2 Health within the United States Department of Health and Human
3 Services.

4 "Operator." An owner, lessee or other ~~individual~~ PERSON who ←
5 operates, controls or supervises a coal mine.

6 "Permissible explosives." Explosives approved for use in
7 mines by the Mine Safety and Health Administration, the National
8 Institute for Occupational Safety and Health or their
9 predecessor agencies, notwithstanding the date of the approval.

10 "Permit boundary." The limits of the mine as established by
11 the coal mine activity permit issued under the act of April 27,
12 1966 (1st Sp. Sess., P.L.31, No.1), known as The Bituminous Mine
13 Subsidence and Land Conservation Act.

14 "PERSON." ANY INDIVIDUAL, PARTNERSHIP, ASSOCIATION, ←
15 CORPORATION, FIRM, SUBSIDIARY OF A CORPORATION OR OTHER
16 ORGANIZATION.

17 "Pointer spads." Additional spads set in the roof to
18 indicate the line of direction or bearing for future
19 excavations. Pointer spads may or may not be referenced in the
20 field notes. Pointer spads are not considered a permanent record
21 because they only indicate direction.

22 "Representative of the miners." A miner employed at the mine
23 who is authorized by a vote of two or more miners working at the
24 same mine to perform the duties specified in this act.

25 "Return air." Air that has ventilated the last working place
26 on any split of any working section or any worked-out area
27 whether pillared or nonpillared. The term shall include all of
28 the following:

29 (1) Air that mixes with air that has ventilated the last
30 working place on any split of any working section or any

1 worked-out area, whether pillared or nonpillared.

2 (2) Any air that has passed or ventilated seal areas.

3 "Secretary." The Secretary of Environmental Protection of
4 the Commonwealth or the designee of the secretary.

5 "Shaft." A vertical opening through the strata that is or
6 may be used for the purpose of ventilation or drainage or for
7 hoisting men or material, or both, in connection with the mining
8 of coal or for other purposes related to mining.

9 ~~"Shift." The scheduled period of work assigned to four or~~ ←
10 ~~more miners by the operator.~~

11 "Slope and drift." An incline or opening used for the same
12 purpose as a shaft.

13 "Spad." A flat spike, firmly anchored in a hole drilled into
14 the mine ceiling from which is threaded a plumbline.

15 "Superintendent." An individual appointed by an operator to
16 manage a mine.

17 "Survey line." A representation of the line of survey from
18 survey station spad to survey station spad as shown on the
19 official mine map.

20 "Survey station spad." A permanent spad set in the roof that
21 has a unique identification number or designation.

22 "Underground bituminous coal mine." A mine and the surface
23 facilities that are physically connected to a mine, including
24 preparation plants and loadouts at a mine, in this Commonwealth
25 and not included in anthracite boundaries.

26 "Ventilation apparatus." All equipment, materials and
27 devices used to establish, provide or support movement of air
28 through a mine.

29 "Work area." Any place at a mine where work is being
30 performed. The term shall not include areas where individuals

1 are making examinations required under this act.

2 "Working place." The area in a mine from the last open
3 crosscut to and including the face.

4 "Working section." The area in a mine from the face
5 extending back 1,000 feet.

6 "Year of experience." For the purposes of issuing
7 certifications under this act, the term shall mean working 240
8 eight-hour days or the hourly equivalent within a 12-month
9 period beginning with the first day of employment in a mine.

10 Section 105. Powers and duties of department.

11 The department shall have the power and duty to administer a
12 mine safety program for individuals employed at mines. The
13 department has the power and duty to do all of the following:

14 (1) Make inspections of public or private property as
15 are necessary or useful in determining compliance with the
16 provisions of this act, the rules and regulations promulgated
17 under this act and any order, approval or permit issued by
18 the department. The inspections may include examining or
19 copying any documents required by this act.

20 (2) Conduct investigations and interviews of individuals
21 at a mine or elsewhere.

22 (3) Issue orders to implement and enforce the provisions
23 of this act.

24 (4) Institute proceedings and actions to implement the
25 provisions and effectuate the purposes of this act, including
26 suits seeking equitable relief or declaratory judgments and
27 suits to recover costs incurred by the department.

28 (5) Institute prosecutions against the operator or his
29 agent for a violation of any provision of this act.

30 (6) Determine whether an individual is qualified to

1 carry out a particular function or duty at a mine and to
2 issue appropriate certification.

3 (7) Disqualify an individual whose conduct poses a
4 threat to the health and safety of those who work at mines or
5 who interfere with the safe operation of any mine.

6 (8) Review and take appropriate action concerning safety
7 of miners and individuals in and about mines on all permit
8 applications submitted to the department.

9 (9) Receive and act upon complaints.

10 (10) Conduct, review and, if funds are allocated for
11 such purposes, commission scientific and other research
12 directed to the purposes of this act.

13 (11) Approve electrical equipment, machinery, materials,
14 methods and plans to be used at mines in this Commonwealth.

15 (12) Approve, on a mine-specific basis, the use of new
16 technology, methods, materials, machinery, equipment,
17 systems, tools, devices, processes and plans different from
18 those required or authorized under the provisions of this act
19 or the regulations promulgated under this act. The department
20 may only make approvals under this paragraph, if the approval
21 meets or exceeds the protections afforded under this act or
22 the regulations promulgated under this act. Approvals under
23 this paragraph shall have no precedent effect. All approvals
24 in effect as of the effective date of this paragraph shall
25 remain in effect unless suspended, modified or revoked by the
26 department.

27 (13) Respond to, coordinate and assist responses to mine
28 accidents and other emergencies.

29 (14) Establish a mine map repository.

30 (15) Serve as the agency of the Commonwealth for the

1 receipt of funds from the Federal Government or other public
2 agencies and expend the funds for studies and research with
3 respect to and for the enforcement and administration of the
4 purposes and provisions of this act and the regulations
5 promulgated under this act.

6 (16) Assess civil penalties.

7 (17) Encourage and promote industry-based mine rescue
8 capabilities.

9 (18) Provide training for department personnel and
10 individuals who work in or who wish to work in the mining
11 industry.

12 (19) Administer, deposit and expend funds from the Mine
13 Safety Fund.

14 (20) Prepare and distribute to operators a mine
15 operator's questionnaire form.

16 (21) Perform any act not inconsistent with any provision
17 of this act, which it may deem necessary or proper for the
18 effective administration or enforcement of this act and the
19 rules or regulations promulgated under this act.

20 Section 106. Board of Coal Mine Safety.

21 (a) Establishment.--The Board of Coal Mine Safety is
22 established AND SHALL DEVELOP ALL OF THE FOLLOWING: <—

23 (1) PROPOSED AMENDMENTS TO THE INTERIM MANDATORY SAFETY
24 STANDARDS.

25 (2) ADDITIONAL REGULATIONS WITH RESPECT TO MINE SAFETY
26 IF THE BOARD DETERMINES THAT EXISTING FEDERAL AND STATE
27 REGULATIONS DO NOT ADEQUATELY ADDRESS A SPECIFIC HAZARD.

28 (3) OTHER REGULATIONS AS SPECIFICALLY AUTHORIZED UNDER
29 THIS ACT.

30 (b) Composition.--The board shall consist of the secretary,

1 who shall be the chairperson, and the following members
2 appointed by the Governor:

3 (1) Three members who represent the viewpoint of the
4 coal mine operators in this Commonwealth.

5 (2) Three members who represent the viewpoint of the
6 working miners in this Commonwealth.

7 (c) Terms.--All appointments shall be subject to the
8 following:

9 (1) The initial appointments after the effective date of
10 this section shall have staggered terms so that, for each
11 group of appointments under subsection (b), one member shall
12 serve a term of one year, one member shall serve a term of
13 two years and one member shall serve a term of three years.
14 All subsequent appointments shall be for terms of three
15 years.

16 (2) Members shall be eligible for reappointment.

17 (d) Representation.--For the initial appointments after the
18 effective date of this section, the following shall apply:

19 (1) The members appointed under subsection (b)(1) shall
20 be selected from a list containing six nominees submitted by
21 the major trade association representing coal mine operators
22 in this Commonwealth.

23 (2) The members appointed under subsection (b)(2) shall
24 be selected from a list containing six nominees submitted by
25 the highest-ranking official within the major labor
26 organization representing coal miners in this Commonwealth.

27 (e) Vacancies.--The following shall apply to vacancies on
28 the board:

29 (1) The members appointed under subsection (b)(1) shall
30 be selected from a list containing three nominees submitted

1 by the major trade association representing coal mine
2 operators in this Commonwealth.

3 (2) The members appointed under subsection (b)(2) shall
4 be selected from a list containing three nominees submitted
5 by the highest-ranking official within the major labor
6 organization representing coal miners in this Commonwealth.

7 (f) Employment.--Members of the board may continue in
8 employment in the coal industry while serving on the board.

9 (g) Service.--Members shall serve at the pleasure of the
10 Governor.

11 (h) Compensation.--Members of the board shall be compensated
12 at the appropriate per diem rate based on the prevailing formula
13 administered by the Commonwealth, but not less than \$150 per
14 day, plus reasonable expenses incurred while performing their
15 official duties. The compensation shall be adjusted annually by
16 the department to account for inflation based on the Consumer
17 Price Index published by the United States Department of Labor.
18 An individual board member may waive his or her right to all or
19 part of the compensation.

20 (i) Meetings.--The board shall meet within 180 days of the
21 effective date of this section for, at a minimum, organizational
22 purposes. Members of the board shall meet at least twice during
23 each calendar year or more often as may be necessary.

24 (j) Access.--In performing its functions, the board shall
25 have access to the services of the department. The department
26 shall make clerical support and assistance available to enable
27 the board to carry out its duties.

28 (k) Funding.--Funding for the operation of the board and
29 implementation of the provisions of this chapter shall be
30 derived from the general government appropriation of the

1 department.

2 (1) Nominations.--If a vacancy on the board occurs,
3 nominations and appointments shall be made in the following
4 manner:

5 (1) In the case of an appointment to fill a vacancy, a
6 list of nominees under subsection (e) shall be requested by
7 and submitted to the Governor within 30 days after the
8 vacancy occurs by the major trade association or major labor
9 organization which nominated the individual whose seat on the
10 board is vacant.

11 (2) The vacancy shall be filled by the Governor within
12 30 days of the receipt of the list of nominees.

13 (m) Quorum.--A quorum of the board shall consist of five
14 members. Actions of the board must be approved by an affirmative
15 vote of at least five members.

16 Section 106.1. Rulemaking.

17 (a) Authority.--The board shall have the authority to
18 promulgate regulations that are necessary or appropriate to
19 implement the requirements of this act and to protect the
20 health, safety and welfare of miners and other individuals in
21 and about mines.

22 (b) Consideration.--The board shall consider promulgating as
23 regulations any Federal mine safety standards that are either:

24 (1) Existing as of the effective date of this section
25 and that are not included in interim mandatory safety
26 standards.

27 (2) New standards, except for standards concerning
28 diesel equipment, promulgated after the effective date of
29 this section.

30 (c) Regulations.--Within 250 days of the effective date of

1 this section, the board shall begin to consider the standards
2 under subsection (b)(1) for promulgation as regulations. If
3 final regulations are not promulgated by the board within three
4 years of the effective date of this section, the department may
5 promulgate final regulations consistent with Federal standards.

6 (d) New standards.--Within 70 days of the effective date of
7 new mine safety standards under subsection (b)(2), the board
8 shall begin to consider standards for promulgation as
9 regulations. If the regulations are not promulgated as final by
10 the board within three years of the effective date of the
11 promulgation of the new standards, the department may promulgate
12 final regulations consistent with Federal standards.

13 (e) Justification for regulations.--Regulations shall be
14 based upon consideration of the latest scientific data in the
15 field, the technical feasibility of standards, experience gained
16 under this and other safety statutes, information submitted to
17 the board in writing by any interested person or the
18 recommendation of any member of the board, if the board
19 determines that a regulation should be developed in order to
20 serve the objectives of this act.

21 (f) Topic.--Without limiting the scope of the board's
22 authority under this section, regulations may address any of the
23 following:

24 (1) Revisions to an interim mandatory safety standard to
25 address a new technology or method of mining.

26 (2) Hazards not addressed by existing safety standards.

27 (3) The identification of positions not listed under
28 this act requiring a certificate of qualification.

29 (4) The establishment of fees for services in amounts
30 sufficient to cover the department's costs of administering

1 this act. The fees established by the board may be increased
2 each year after implementation by the percentage, if any, by
3 which the Consumer Price Index for the most recent calendar
4 year exceeds the Consumer Price Index for the calendar year
5 1989. For the purposes of this paragraph, the Consumer Price
6 Index for any calendar year shall mean the average of the
7 Consumer Price Index for All Urban Consumers, published by
8 the United States Department of Labor, as of the close of the
9 12-month period ending on August 31 of each calendar year.

10 (g) Safety.--No regulation promulgated by the board shall
11 reduce or compromise the level of safety or protection afforded
12 mine workers under this act. The department may disapprove a
13 final regulation approved by the board which the department
14 determines would reduce or compromise the level of safety or
15 protection afforded mine workers under this act if the
16 department describes the basis for the disapproval.

17 (h) Miner Act.--With regard to the adoption of Federal
18 standards established pursuant to the Mine Improvement and New
19 Emergency Response Act of 2006 (Public Law 109-236, 120 Stat.
20 493), the following shall apply:

21 (1) The board is specifically authorized to promulgate
22 regulations that the board deems appropriate, including
23 accelerated compliance schedules and additional requirements.

24 (2) The board shall consider promulgating regulations
25 regarding flammability standards for conveyor belts.

26 (3) If MSHA fails to promulgate regulations regarding
27 emergency shelters and chambers, the board shall promulgate
28 regulations.

29 (4) Regulations shall be no less stringent than the
30 Federal mine safety standards

1 (i) Action.--The board shall take action on the tests and
2 evaluations performed by the mining industry under section
3 334(b) and (c).

4 (j) Fees.--The department may set reasonable interim fees
5 pending adoption of fee regulations under this section.

6 Section 106.2. Emergency shelters and chambers.

7 The board's emergency shelter or chamber regulations shall
8 consider all of the following:

9 (1) Provide a minimum of 48 hours of life support,
10 including air, water, emergency medical supplies and food,
11 for the maximum number of miners reasonably expected to be on
12 the working section.

13 (2) Be capable of surviving an initial event with a peak
14 over pressure of 15 pounds per square inch for three seconds
15 and a flash fire, as defined by National Fire Protection
16 Association standard NFPA-2113, of 300 degrees Fahrenheit for
17 three seconds.

18 (3) Be constructed in a manner that the emergency
19 shelter or chamber will be protected under normal handling
20 and pre-event mine conditions.

21 (4) Provide for rapidly establishing and maintaining an
22 internal shelter atmosphere of oxygen above 19.5%, carbon
23 dioxide below 0.5%.

24 (5) Provide for carbon monoxide below 50 parts per
25 million and an apparent-temperature of 95 degrees Fahrenheit.

26 (6) Provide the ability to monitor carbon monoxide and
27 oxygen inside and outside the shelter or chamber.

28 (7) Provide a means for entry and exit that maintains
29 the integrity of the internal atmosphere.

30 (8) Provide a means for MSHA-certified intrinsically

1 safe power if power is required.

2 (9) Provide a minimum of eight quarts of water per
3 miner.

4 (10) Provide a minimum of 4,000 calories of food per
5 miner.

6 (11) Provide a means for disposal of human waste to the
7 outside of the shelter or chamber.

8 (12) Provide a first aid kit.

9 (13) Have provisions for inspection of the shelter or
10 chamber and its contents.

11 (14) Contain manufacturer-recommended repair materials.

12 (15) Provide a battery-powered, occupant-activated
13 strobe light, of a model approved by the board, that is
14 visible from the outside indicating occupancy.

15 (16) Provide provisions for communication to the
16 surface.

17 (17) Provide proof of current approval for all items and
18 materials subject to approval.

19 Section 106.3. Notice to operators and miners.

20 The department shall send a copy in writing or electronically
21 of every proposed regulation and final regulation, at the time
22 of publication in the Pennsylvania Bulletin, to the operator of
23 each mine and, where applicable, the representative of the
24 miners at the mine, and the copy shall be immediately posted on
25 the bulletin board of the mine by the operator or the operator's
26 agent. Failure to receive the notice shall not invalidate the
27 final regulation or relieve anyone of the obligation to comply
28 with final regulation.

29 Section 106.4. Standards for surface facilities.

30 The department shall use the applicable standards contained

1 in 30 CFR Part 77 (relating to mandatory safety standards,
2 surface coal mines and surface work areas of underground coal
3 mines) regarding the sinking of shafts and slopes and surface
4 facilities that are part of mines, pending promulgation of
5 regulations by the board regarding those activities and
6 facilities.

7 SECTION 106.5. TRACK DISTANCE. ←

8 (A) DETERMINATION BY BOARD.--WITHIN 14 DAYS OF THE INITIAL
9 MEETING OF THE BOARD, THE BOARD SHALL MAKE A DETERMINATION
10 WHETHER TO PROMULGATE REGULATIONS PROVIDING FOR EXCEPTIONS TO
11 SECTION 258(A.2). IF THE BOARD DECIDES TO PROMULGATE REGULATIONS
12 PROVIDING FOR ANY OF THE EXCEPTIONS DESCRIBED IN SUBSECTION (B),
13 ANY EXCEPTIONS AS APPROVED BY THE BOARD FOR PROPOSED RULEMAKING
14 SHALL BECOME AND REMAIN IN EFFECT UNTIL THE COMPLETION OF THE
15 RULEMAKING PROCESS. ANY EXCEPTIONS APPROVED BY THE BOARD SHALL
16 REQUIRE THE OPERATOR TO MAKE READILY AVAILABLE A SELF-PROPELLED
17 TRANSPORT VEHICLE WITH RUBBER TIRES IN THE WORKING SECTION FOR
18 TRANSPORTATION OF SICK OR INJURED MINERS.

19 (B) EXCEPTIONS.--THE FOLLOWING EXCEPTIONS TO SECTION
20 258(A.2) SHALL BE CONSIDERED BY THE BOARD PURSUANT TO SUBSECTION
21 (A):

- 22 (1) BLEEDER ENTRY DEVELOPMENT.
- 23 (2) DEVELOPMENT OF LONGWALL SETUP ENTRIES.
- 24 (3) DEVELOPMENT OF LONGWALL RECOVERY ENTRIES.
- 25 (4) STARTUP OF A WORKING SECTION OFF MAINS OR SUBMAINS
26 ENTRIES.

27 Section 107. Safety issues.

28 The department shall consider the safety of miners in
29 reviewing and acting on applications for permits issued to and
30 for mines and shall include conditions addressing safety in

1 issuing the permits. If the department determines that any
2 aspect of the contemplated activity at an existing or proposed
3 mine might constitute a threat to the health and safety of
4 miners or individuals in and about mines, the department shall
5 require the applicant or operator to eliminate the threat. If
6 the applicant or operator does not eliminate the threat to the
7 department's satisfaction, the department shall deny the
8 application or applications or shall unilaterally modify the
9 terms of the permit or suspend or revoke the permit.

10 Section 108. Inspections.

11 ~~(a) Frequency and purpose.~~ (A) FREQUENCY AND PURPOSE.--The <—
12 department shall make frequent inspections of mines. Each mine
13 shall be inspected at least semiannually for electrical purposes
14 and at least quarterly for general purposes. Inspections shall
15 be conducted more frequently when the department determines that
16 more frequent inspections are necessary or desirable.

17 Inspections shall be conducted for the purposes of:

18 (1) Obtaining, utilizing and disseminating information
19 relating to health and safety conditions, the causes of
20 accidents and the causes of diseases and physical impairments
21 originating in mines.

22 (2) Gathering information with respect to health or
23 safety standards established or regulations promulgated under
24 this act.

25 (3) Determining whether a danger exists.

26 (4) Determining whether the mine is in compliance with
27 the provisions of this act, the mine safety regulations and
28 any order, permit or decision issued by the department under
29 this act.

30 ~~(b) Accompaniment. A representative of the operator and a <—~~

1 ~~representative of the miners shall be given the opportunity to~~
2 ~~accompany the department during the physical inspection of any~~
3 ~~coal mine or coal facility, including preparation plants, shops,~~
4 ~~coal handling facilities and all other areas associated with the~~
5 ~~coal mining operation, made pursuant to this act. The purpose of~~
6 ~~this accompaniment is to aid the inspection and to participate~~
7 ~~in all preinspection and post inspection closeouts and~~
8 ~~conferences and other activities required of the department~~
9 ~~under this act. The representative of the miners shall suffer no~~
10 ~~loss of pay during the period of participation in the~~
11 ~~inspection. Where there is no authorized representative of the~~
12 ~~miners, the department shall meet with no fewer than two miners~~
13 ~~concerning health and safety at the mine. To the extent the~~
14 ~~department determines more than one representative from each~~
15 ~~party would further aid the inspection, the department may~~
16 ~~permit each party to have an equal number of additional~~
17 ~~representatives. For purposes of this subsection, the~~
18 ~~designation of the representative of miners shall be made in~~
19 ~~accordance with 30 CFR Pt. 40 (relating to representative of~~
20 ~~miners).~~

21 (B) ACCOMPANIMENT.--A REPRESENTATIVE OF THE OPERATOR AND A <—
22 REPRESENTATIVE OF THE MINERS SHALL BE GIVEN THE OPPORTUNITY TO
23 ACCOMPANY THE DEPARTMENT DURING THE PHYSICAL INSPECTION OF ANY
24 COAL MINE OR COAL FACILITY, INCLUDING PREPARATION PLANTS, SHOPS,
25 COAL HANDLING FACILITIES AND ALL OTHER AREAS ASSOCIATED WITH THE
26 COAL MINING OPERATION, MADE PURSUANT TO THIS ACT. THE PURPOSE OF
27 THIS ACCOMPANIMENT IS TO AID THE INSPECTION AND TO PARTICIPATE
28 IN ALL PREINSPECTION AND POSTINSPECTION CLOSEOUTS AND
29 CONFERENCES AND OTHER ACTIVITIES REQUIRED OF THE DEPARTMENT
30 UNDER THIS ACT. THE REPRESENTATIVE OF THE MINERS SHALL SUFFER NO

1 LOSS OF PAY DURING THE PERIOD OF PARTICIPATION IN THE
2 INSPECTION. WHERE THERE IS NO AUTHORIZED REPRESENTATIVE OF THE
3 MINERS, THE DEPARTMENT SHALL MEET WITH NO FEWER THAN TWO MINERS
4 CONCERNING HEALTH AND SAFETY AT THE MINE. TO THE EXTENT THE
5 DEPARTMENT DETERMINES MORE THAN ONE REPRESENTATIVE FROM EACH
6 PARTY WOULD FURTHER AID THE INSPECTION, THE DEPARTMENT MAY
7 PERMIT EACH PARTY TO HAVE AN EQUAL NUMBER OF ADDITIONAL
8 REPRESENTATIVES. HOWEVER, ONLY ONE SUCH REPRESENTATIVE OF THE
9 MINERS WHO IS AN EMPLOYEE OF THE OPERATOR SHALL BE ENTITLED TO
10 SUFFER NO LOSS OF PAY DURING THE PERIOD OF SUCH PARTICIPATION
11 UNDER THE PROVISIONS OF THIS SUBSECTION. FOR PURPOSES OF THIS
12 SUBSECTION, THE DESIGNATION OF THE REPRESENTATIVE OF MINERS
13 SHALL BE MADE IN ACCORDANCE WITH 30 CFR PT. 40 (RELATING TO
14 REPRESENTATIVE OF MINERS), EXCEPT THAT THE REPRESENTATIVE OF THE
15 MINERS SHALL BE AN EMPLOYEE OF THE MINE BEING INSPECTED.

16 Section 109. Accidents.

17 (a) Duties of operator.--In the event of an accident
18 occurring at a mine, an operator shall do all of the following:

19 (1) Notify the department no later than 15 minutes of
20 discovery of the accident.

21 (2) Take appropriate measures to prevent the destruction
22 of evidence which would assist in investigating the cause of
23 the accident. Unless granted permission by the department, no
24 operator may alter an accident site or an accident-related
25 area until completion of all investigations pertaining to the
26 accident, except to rescue any individual and prevent
27 destruction of mine equipment.

28 (3) Obtain the approval of the department for any plan
29 to recover an individual in the mine, to recover the coal
30 mine or to return the affected areas of the mine to normal

1 operations.

2 (4) Conduct its own investigation of the accident and
3 develop a written report of the investigation. The report
4 shall include all of the following:

5 (i) The date and hour of the accident.

6 (ii) The date the investigation began.

7 (iii) The names of the individuals participating in
8 the investigation.

9 (iv) A description of the accident site.

10 (v) An explanation of the accident or injury,
11 including a description of any equipment involved and
12 relevant events before and after the accident.

13 (vi) An explanation of the cause of the accident.

14 (vii) An explanation of the cause of any injury
15 sustained due to the accident.

16 (viii) The name, occupation and experience of any
17 miner involved in the accident.

18 (ix) A sketch depicting the accident, including
19 dimensions where pertinent.

20 (x) A description of steps taken to prevent a
21 similar accident in the future.

22 (b) Duties of department.--In the event of an accident
23 occurring at a mine, the department shall do all of the
24 following:

25 (1) Take whatever action it deems appropriate, including
26 the issuance of orders, to protect the life, health or safety
27 of an individual, including coordinating and assisting rescue
28 and recovery activities in the mine.

29 (2) Promptly decide whether to conduct an investigation
30 of the accident and inform the operator and the

1 representative of the miners of its decision.

2 (c) Report.--Each operator shall report to the department
3 each accident and lost-time injury.

4 (1) The operator shall report within ten working days of
5 the accident or lost-time injury. An operator may meet the
6 requirements of this paragraph by submitting a copy of the
7 MSHA Mine Accident, Injury and Illness Report Form 7000-1
8 required by 30 CFR § 50.20 (relating to preparation and
9 submission of MSHA Report Form 7000-1--Mine Accident, Injury,
10 and Illness Report) in use on the date of the accident.

11 (2) Each accident and lost-time injury shall be reported
12 on a separate form. If more than one miner is injured in the
13 same accident, the operator shall submit a separate form for
14 each miner affected.

15 Section 110. Mine officials' certification.

16 (a) Administration.--After evaluating the examinations, the
17 department shall issue certificates to those candidates who have
18 met the established criteria for each certification category.

19 (b) Committee.--

20 (1) The department shall appoint a committee to annually
21 review and update the department's database of examination
22 questions and answers. The committee shall be made up of an
23 equal number of persons representing the viewpoints of the
24 department, operators and miners.

25 (2) Members of the committee shall be compensated in the
26 same manner as members of the board under section 106(h). An
27 individual committee member may waive the right to all or
28 part of the compensation under this paragraph.

29 (3) Members of the committee shall, after the committee
30 has been duly organized, take and subscribe the following

1 oath before an officer authorized to administer oaths:

2 We, the undersigned, do solemnly swear that we will
3 perform the duties of members of this committee, and we
4 will not divulge or make known to an individual any
5 question prepared for the mine officials, or in any
6 manner assist any applicant to pass the examination.

7 (c) Confidential records.--Records pertaining to
8 certification examinations shall not constitute a public record
9 under the act of June 21, 1957 (P.L.390, No.212), referred to as
10 the Right-to-Know Law.

11 Section 111. Classification of mines as gassy.

12 Notwithstanding any other provision of law, the distinction
13 between gassy and nongassy mines is eliminated, and all
14 underground bituminous mines shall comply with the requirements
15 for gassy mines.

16 Section 112. Reports.

17 (a) Questionnaire.--The operator of an underground mine
18 shall submit to the department a completed or revised deep mine
19 questionnaire in the following instances:

20 (1) Prior to the commencement of any work for the
21 purpose of opening of a new underground mine or reopening an
22 underground mine that has closed.

23 (2) Upon change of the information reflected on the most
24 recently submitted operator's questionnaire.

25 (a.1) Notice.--Upon discontinuance of the operation of an
26 underground mine, the operator shall immediately notify the
27 department.

28 (b) Quarterly reports.--

29 (1) Each operator of an active mine shall submit
30 quarterly reports within 15 days after the end of each

1 quarter. The report shall contain information reflecting the
2 activities of the previous quarter and shall include all of
3 the following:

4 (i) The name and address of the mine.

5 (ii) Identification of the mine superintendent and
6 mine foreman.

7 (iii) The employment, employee hours and coal
8 production statistics for the mine.

9 (iv) A detailed description of the reportable
10 injuries or accidents that occurred at the mine.

11 (2) An operator may meet the requirements of paragraph
12 (1) by submitting a copy of the MSHA Quarterly Employment and
13 Coal Production Report in use on the date of the quarterly
14 report.

15 (c) Corrections.--By February 15 of each year, an operator
16 must submit any corrections to the quarterly reports submitted
17 during the prior year and must certify the accuracy of the
18 corrected quarterly reports.

19 (d) Additional duties.--In addition to any records required
20 under this act, a mine operator shall establish and maintain
21 records, make reports and provide information as the department
22 may require from time to time. The department is authorized to
23 compile, analyze and publish, either in summary or detail form,
24 the reports or information obtained. All records, information,
25 reports, findings, notices, orders or decisions required or
26 issued pursuant to or under this act may be published from time
27 to time, may be released to any interested person and shall
28 constitute a public record under the act of June 21, 1957
29 (P.L.390, No.212), referred to as the Right-to-Know Law.

30 (e) Copies.--An operator of a mine shall maintain a copy of

1 the reports required by this section at the mine office closest
2 to the mine for a period of not less than five years after
3 submission of the reports.

4 Section 113. Mine rescue program.

5 (a) Establishment.--The department is authorized to
6 establish and administer a mine rescue program for mines not
7 able to provide a mine rescue crew for themselves. The
8 department shall establish a program to do the following:

9 (1) Instruct mine employees how to care for individuals
10 injured in and about the mines.

11 (2) Train mine employees who may voluntarily seek
12 training in the use of self-contained breathing apparatus,
13 gas masks, first aid to the injured and other things or
14 practices essential to the safe and efficient conduct of the
15 work of first aid and mine rescue.

16 (b) Equipment.--The department shall purchase and maintain
17 adequate quantities of emergency response vehicles, specialized
18 equipment, supplies and services necessary to assure rapid and
19 effective response to mine emergencies, including mine fires,
20 mine explosions, mine inundations, entrapments and mine recovery
21 operations.

22 (c) Contracts.--In the event of an emergency response, the
23 department may use the emergency contracting provisions of 62
24 Pa.C.S. § 516 (relating to emergency procurement) to lease
25 additional services or equipment as is needed to respond to a
26 mine emergency. The department, with the consent of the
27 Governor, may use funds available to the Commonwealth for the
28 purpose of responding to a mine emergency.

29 Section 114. Direction of mine rescue work.

30 The department shall coordinate and assist in all responses

1 to a mine emergency conducted in this Commonwealth. The extent
2 of coordination and assistance shall depend on the nature of the
3 mine emergency and the operator's ability to respond to the mine
4 emergency. This authority shall include directing responses to
5 mine emergencies and assigning mine rescue crews and mine rescue
6 and recovery work to mine inspectors or other qualified
7 employees of the department.

8 Section 115. Recovery of funds.

9 The department is authorized to seek from an operator
10 reimbursement of funds expended by the department to rent
11 equipment and obtain services in responding to a mine emergency.

12 Section 116. Mine Safety Fund.

13 There is created a special fund known as the Mine Safety
14 Fund. All moneys received by the department under this act and
15 all moneys recovered from operators for expenses incurred in
16 responding to a mine emergency shall be deposited by the State
17 Treasurer into the Mine Safety Fund. All moneys deposited in the
18 fund are hereby appropriated, upon approval of the Governor, to
19 the department for mine safety activities and the administration
20 of this act.

21 Section 117. Bituminous mine inspector.

22 Notwithstanding the act of August 5, 1941 (P.L.752, No.286),
23 known as the Civil Service Act, in order to become eligible for
24 employment as a bituminous mine inspector, an individual must,
25 at a minimum, meet the following qualifications:

26 (1) Be a resident of this Commonwealth.

27 (2) Be an individual of good moral character and known
28 temperate habits.

29 (3) Be physically capable of entering and inspecting a
30 coal mine.

1 (4) Have at least a high school diploma.

2 (5) Be at least 30 years of age.

3 (6) Have had at least ten years' experience in an
4 underground bituminous coal mine.

5 (7) Hold a current, valid certificate as a bituminous
6 mine foreman, assistant mine foreman or mine examiner.

7 (8) Pass, with at least a score of 90%, the mine
8 inspector's examination as conducted by the State Civil
9 Service Commission in accordance with the Civil Service Act.

10 Section 118. Bituminous mine electrical inspector.

11 Notwithstanding the act of August 5, 1941 (P.L.752, No.286),
12 known as the Civil Service Act, in order to become eligible for
13 employment as a bituminous mine electrical inspector, an
14 individual must meet at least the following qualifications:

15 (1) Be a resident of this Commonwealth.

16 (2) Be an individual of good moral character and known
17 temperate habits.

18 (3) Be physically capable of entering and inspecting a
19 coal mine.

20 (4) Have at least a high school diploma.

21 (5) Be at least 30 years of age.

22 (6) Have had at least ten years' experience in an
23 underground bituminous coal mine.

24 (7) Hold a current, valid certificate as a bituminous
25 mine electrician.

26 (8) Pass, with at least a score of 90%, the mine
27 electrical inspector's examination as conducted by the State
28 Civil Service Commission in accordance with the Civil Service
29 Act.

30 Section 119. Availability of mine maps.

1 (a) Authorization.--The department is authorized and
2 directed to obtain and copy all maps of mining conducted in this
3 Commonwealth.

4 (b) Inspection and copying.--An individual who has
5 possession of a mine map shall make the map available to the
6 department for inspection and copying. The map shall be returned
7 to its owner within 30 days.

8 (c) Liability.--No individual shall, solely on the basis of
9 supplying a mine map to the department, be attributed or
10 divested of liability.

11 Section 120. Mine map repository.

12 The department shall develop and maintain a repository of all
13 mine maps it has obtained or has had an opportunity to copy. The
14 department shall organize and catalog the mine maps in the
15 repository to enable the department, other government agencies,
16 mine operators and the general public to review the mine maps
17 and to determine the location of mine workings. All mine maps
18 and copies of mine maps held by the department shall be open for
19 public inspection and made available for review upon request
20 during the department's normal business hours.

21 Section 121. Applicability.

22 The provisions of Chapters 2 and 3 shall not apply to the
23 construction of shafts and slopes.

24 CHAPTER 2

25 GENERAL REQUIREMENTS FOR UNDERGROUND BITUMINOUS MINES

26 Section 201. General safety requirements.

27 The following are general safety requirements:

28 (1) All work must be performed in a safe manner.

29 (2) All equipment must be maintained in safe operating
30 condition.

1 (3) No individual shall be employed as a mine foreman,
2 assistant mine foreman, mine examiner, mine electrician,
3 mining machine operator, shot-firer or miner unless that
4 individual holds a current, valid certification from the
5 department to work in that capacity. An individual who holds
6 a current, valid certification to be a mine foreman may also
7 work as an assistant mine foreman or mine examiner. Only a
8 mine official shall direct the work force in matters
9 involving the safety of employees. An individual who holds a
10 current, valid certification as an assistant mine foreman may
11 also work as a mine examiner.

12 (4) It shall be the duty of the operator and all mine
13 officials to comply with and see that others comply with the
14 provisions of this act, the regulations promulgated pursuant
15 to this act, all orders and approvals and the safety
16 conditions in permits issued to the mine. It shall also be
17 the duty of the operator and all mine officials to cooperate
18 with the department in implementing the provisions of this
19 act and effectuating the purposes of this act.

20 (5) The operator and all mine officials shall comply
21 with and follow all mining plans, approvals and orders issued
22 by the department, rules and regulations of the operator, all
23 provisions of law that are in harmony with this act and all
24 other applicable laws. The operator is responsible for
25 assuring that all activities in and around the mine,
26 including those conducted by contractors, are conducted in
27 compliance with this act, regulations promulgated under this
28 act, approvals and orders issued by the department and any
29 safety conditions included in permits.

30 (6) During coal production, an assistant mine foreman

1 shall be assigned to only one working section. The assistant
2 mine foreman shall supervise individuals engaged in the coal-
3 cutting operation. The assistant mine foreman may perform
4 additional duties provided that he spends a majority of his
5 time supervising individuals engaged in the coal-cutting
6 operation.

7 (7) Every superintendent, mine foreman, assistant mine
8 foreman, mine electrician and mine examiner shall represent
9 the Commonwealth in the mine in which he is employed and
10 shall be deemed an officer of the Commonwealth in enforcing
11 the provisions of this act and performing the mine official's
12 duties under this act. The superintendent, mine foreman,
13 assistant mine foreman, mine electrician or mine examiner
14 shall perform these duties during such times as the mine is
15 in operation and at such other times as the department deems
16 to be necessary or appropriate to make the mine safe and to
17 protect the health and safety of those who work in and around
18 the mine.

19 Section 202. Qualifications for certification.

20 ~~(a) Qualifications for mine foremen. Applicants for~~ <—
21 ~~certificates of qualification as mine foremen and mine~~
22 ~~electricians shall:~~

23 ~~(1) Be citizens of the United States.~~

24 ~~(2) Be of good moral character and of known temperate~~
25 ~~habits.~~

26 ~~(3) Be at least 23 years of age.~~

27 ~~(4) Have no fewer than five years of practical~~
28 ~~experience after turning 18 years of age, as miners or mining~~
29 ~~engineers or men of general work. This experience shall~~
30 ~~include three years' experience in working sections in~~

1 ~~underground bituminous coal mines. Individuals graduating~~
2 ~~with a bachelor's degree in civil engineering, electrical~~
3 ~~engineering or mining engineering or an associate degree in a~~
4 ~~mining engineering course of study at a recognized~~
5 ~~institution of learning may, after examination, be granted~~
6 ~~certificates of qualification by an examining board as mine~~
7 ~~foremen and mine electricians, provided the graduates have an~~
8 ~~aggregate of no fewer than three years' practical experience~~
9 ~~as miners or men of general work or mining engineers, in~~
10 ~~underground bituminous coal mines in the working section.~~

11 ~~(b) Qualifications for assistant mine foremen. Applicants~~
12 ~~for certificates of qualification as assistant mine foremen~~
13 ~~shall:~~

14 ~~(1) Be citizens of the United States.~~

15 ~~(2) Be of good moral character and of known temperate~~
16 ~~habits.~~

17 ~~(3) Have at least four years of practical experience,~~
18 ~~with at least three years' experience in working sections,~~
19 ~~after turning 18 years of age, as miners or mining engineers~~
20 ~~or men of general work, in underground bituminous coal mines.~~

21 ~~Individuals graduating with a bachelor's degree in civil~~
22 ~~engineering, electrical engineering or mining engineering, or~~
23 ~~an associate degree in a mining engineering course of study~~
24 ~~at a recognized institution of learning may, after~~
25 ~~examination, be granted certificates of qualification by an~~
26 ~~examining board as assistant mine foremen, provided the~~
27 ~~graduates have an aggregate of no fewer than three years of~~
28 ~~practical experience as miners or mining engineers or men of~~
29 ~~general work, in underground bituminous coal mines in working~~
30 ~~sections.~~

~~(c) Qualifications for mine examiners. Applicants for certificates of qualification as mine examiners shall:~~

~~(1) Be citizens of the United States.~~

~~(2) Be of good moral character and of known temperate habits.~~

~~(3) Have at least three years of practical experience after turning 18 years of age, as miners or mining engineers or men of general work, in underground bituminous coal mines in working sections.~~

~~(d) Other qualifications. All applicants shall:~~

~~(1) Be able to read and write the English language.~~

~~(2) Furnish the board with certificates as to their character and temperate habits.~~

~~(3) Provide a notarized statement from previous employers setting forth the length of service and type of work performed in each mine.~~

~~(e) Qualifications for mine foremen certificates.~~

~~Certificates of qualification as mine foremen shall be granted to individuals who have:~~

~~(1) Given the examining board satisfactory evidence of their ability to perform the duties of mine foremen.~~

~~(2) Received training by individuals approved by the department in determining the presence of explosive and noxious gases and in the use and mechanics of all gas detection devices.~~

~~(3) Received an average of at least 80% in the examination.~~

~~(f) Qualifications for assistant mine foreman certificates. Certificates of qualification as assistant mine foremen shall be granted to persons who have:~~

1 ~~(1) Given the examining board satisfactory evidence of~~
2 ~~their ability to perform the duties of assistant mine~~
3 ~~foremen.~~

4 ~~(2) Received training by individuals approved by the~~
5 ~~department in determining the presence of explosive and~~
6 ~~noxious gases and in the use and mechanics of all gas~~
7 ~~detection devices.~~

8 ~~(3) Received an average of at least 70% in the~~
9 ~~examination.~~

10 ~~(g) Qualifications for mine examiner certificates. Mine~~
11 ~~examiner certificates shall be granted to individuals who have:~~

12 ~~(1) Given the examining board satisfactory evidence of~~
13 ~~their ability to perform the duties of mine examiners.~~

14 ~~(2) Have received training by individuals approved by~~
15 ~~the department in determining the presence of explosive and~~
16 ~~noxious gases and in the use and mechanics of all gas~~
17 ~~detection devices.~~

18 ~~(3) Received an average of at least 75% in the mine~~
19 ~~examiners examination.~~

20 ~~(h) Qualifications for a mine electrician certificates.~~
21 ~~Certificates of qualification for mine electricians shall be~~
22 ~~granted to individuals who have:~~

23 ~~(1) Given the examining board satisfactory evidence of~~
24 ~~their ability to perform the duties of mine electrician.~~

25 ~~(2) Have received training by individuals approved by~~
26 ~~the department in determining the presence of explosive and~~
27 ~~noxious gases and in the use and mechanics of all gas~~
28 ~~detection devices.~~

29 ~~(3) Received an average of 75% in the examination for~~
30 ~~mine electricians.~~

1 ~~(i) Oral examinations and additional training. All~~
2 ~~applicants who have satisfactorily passed a written examination~~
3 ~~shall also satisfactorily pass an oral examination, and after~~
4 ~~being certified but before assuming their duties as mine~~
5 ~~foremen, mine electricians, assistant mine foremen or mine~~
6 ~~examiners, shall accompany a certified mine foreman or a~~
7 ~~certified assistant mine foreman while executing the duties of~~
8 ~~their position for the entire shift for a period of not less~~
9 ~~than ten full working shifts for training purposes in accordance~~
10 ~~with a training program submitted by the operator and approved~~
11 ~~by the department. Applicants who have previously obtained a~~
12 ~~certificate need not undergo this training. The record of the~~
13 ~~training given under this section shall be maintained at the~~
14 ~~mine.~~

15 (A) GENERAL REQUIREMENTS.--

←

16 (1) EXCEPT AS SET FORTH UNDER PARAGRAPH (2), IN ORDER TO
17 BE ELIGIBLE TO SIT FOR A CERTIFICATION EXAMINATION, THE
18 FOLLOWING SHALL APPLY:

19 (I) AN APPLICANT MUST DEMONSTRATE THE FOLLOWING
20 LEVELS OF WORK EXPERIENCE IN AN UNDERGROUND BITUMINOUS
21 COAL MINE:

22 (A) MINE FOREMAN OR MINE ELECTRICIAN, FIVE
23 YEARS.

24 (B) ASSISTANT MINE FOREMAN, FOUR YEARS.

25 (C) MINE EXAMINER, THREE YEARS.

26 (II) FOR EACH CERTIFICATION CATEGORY IN SUBPARAGRAPH
27 (I), A MINIMUM OF TWO YEARS' EXPERIENCE MUST HAVE BEEN IN
28 A WORKING SECTION.

29 (2) IF AN APPLICANT HOLDS A BACHELOR'S DEGREE IN MINING
30 ENGINEERING OR AN ASSOCIATE DEGREE IN MINING TECHNOLOGY FROM

1 A RECOGNIZED INSTITUTION OF HIGHER EDUCATION IN THE CASE OF A
2 MINE FOREMAN, ASSISTANT MINE FOREMAN OR MINE EXAMINER, OR A
3 BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING OR AN ASSOCIATE
4 DEGREE IN ELECTRICAL TECHNOLOGY FROM A RECOGNIZED INSTITUTION
5 OF HIGHER EDUCATION IN THE CASE OF A MINE ELECTRICIAN, IN
6 ORDER TO BE ELIGIBLE TO SIT FOR A CERTIFICATION EXAMINATION,
7 THE FOLLOWING SHALL APPLY:

8 (I) AN APPLICANT MUST DEMONSTRATE THE FOLLOWING
9 LEVELS OF WORK EXPERIENCE IN AN UNDERGROUND BITUMINOUS
10 COAL MINE:

11 (A) MINE FOREMAN OR MINE ELECTRICIAN, FOUR
12 YEARS.

13 (B) ASSISTANT MINE FOREMAN, THREE YEARS.

14 (C) MINE EXAMINER, TWO YEARS.

15 (II) FOR EACH CERTIFICATION CATEGORY IN SUBPARAGRAPH
16 (I), A MINIMUM OF ONE YEAR'S EXPERIENCE MUST HAVE BEEN IN
17 A WORKING SECTION.

18 (B) ADDITIONAL REQUIREMENTS.--THE FOLLOWING ADDITIONAL
19 REQUIREMENTS SHALL APPLY:

20 (1) ALL APPLICANTS SHALL BE ABLE TO READ AND WRITE THE
21 ENGLISH LANGUAGE INTELLIGENTLY, AND SHALL FURNISH THE
22 DEPARTMENT WITH ~~CERTIFICATES AS TO THEIR CHARACTER AND~~ ←
23 ~~TEMPERATE HABITS, AND~~ A NOTARIZED STATEMENT FROM PREVIOUS
24 EMPLOYERS SETTING FORTH THE LENGTH OF SERVICE AND TYPE OF
25 WORK PERFORMED IN THE DIFFERENT MINES.

26 (2) CERTIFICATES OF QUALIFICATION AS MINE FOREMEN SHALL
27 BE GRANTED TO INDIVIDUALS WHO HAVE GIVEN TO THE DEPARTMENT
28 SATISFACTORY EVIDENCE OF THEIR ABILITY TO PERFORM THE DUTIES
29 OF MINE FOREMAN AND WHO HAVE RECEIVED TRAINING BY INDIVIDUALS
30 APPROVED BY THE DEPARTMENT IN DETERMINING THE PRESENCE OF

1 EXPLOSIVE AND NOXIOUS GASES, AND IN THE USE AND MECHANICS OF
2 ALL GAS DETECTION DEVICES, AND WHO HAVE RECEIVED AN AVERAGE
3 OF AT LEAST 80% IN THE EXAMINATION.

4 (3) CERTIFICATES OF QUALIFICATION AS ASSISTANT MINE
5 FOREMEN SHALL BE GRANTED TO INDIVIDUALS WHO HAVE GIVEN TO THE
6 DEPARTMENT SATISFACTORY EVIDENCE OF THEIR ABILITY TO PERFORM
7 THE DUTIES OF ASSISTANT MINE FOREMAN AND WHO HAVE RECEIVED
8 TRAINING BY INDIVIDUALS APPROVED BY THE DEPARTMENT IN
9 DETERMINING THE PRESENCE OF EXPLOSIVE AND NOXIOUS GASES, AND
10 IN THE USE AND MECHANICS OF ALL GAS DETECTION DEVICES, AND
11 WHO HAVE RECEIVED AN AVERAGE OF AT LEAST 70% IN THE
12 EXAMINATION.

13 (4) CERTIFICATES OF QUALIFICATION AS MINE EXAMINERS
14 SHALL BE GRANTED TO INDIVIDUALS WHO HAVE GIVEN TO THE
15 DEPARTMENT SATISFACTORY EVIDENCE OF THEIR ABILITY TO PERFORM
16 THE DUTIES OF MINE EXAMINERS AND WHO HAVE RECEIVED TRAINING
17 BY INDIVIDUALS APPROVED BY THE DEPARTMENT IN DETERMINING THE
18 PRESENCE OF EXPLOSIVE AND NOXIOUS GASES, AND IN THE USE AND
19 MECHANICS OF ALL GAS DETECTION DEVICES, AND WHO HAVE RECEIVED
20 AN AVERAGE OF AT LEAST 75% IN THE MINE EXAMINERS EXAMINATION.

21 (5) CERTIFICATES OF QUALIFICATION AS MINE ELECTRICIAN
22 SHALL BE GRANTED TO INDIVIDUALS WHO HAVE GIVEN TO THE
23 DEPARTMENT SATISFACTORY EVIDENCE OF THEIR ABILITY TO PERFORM
24 THE DUTIES OF MINE ELECTRICIAN AND RECEIVED TRAINING BY
25 INDIVIDUALS APPROVED BY THE DEPARTMENT IN DETERMINING THE
26 PRESENCE OF EXPLOSIVE AND NOXIOUS GASES, AND IN THE USE AND
27 MECHANICS OF ALL GAS DETECTION DEVICES, AND WHO HAVE RECEIVED
28 AN AVERAGE OF 75% IN THE MINE ELECTRICIAN'S EXAMINATION.

29 (6) CERTIFICATES OF QUALIFICATION OR SERVICE GRANTED
30 PRIOR TO THE EFFECTIVE DATE OF THIS ACT SHALL HAVE EQUAL

1 VALUE WITH CERTIFICATES OF QUALIFICATION GRANTED UNDER THIS
2 ACT.

3 (7) ALL APPLICANTS WHO HAVE SATISFACTORILY PASSED
4 EXAMINATIONS, AFTER BEING CERTIFIED BUT BEFORE ASSUMING THEIR
5 DUTIES AS MINE FOREMEN, MINE ELECTRICIANS, ASSISTANT MINE
6 FOREMEN OR MINE EXAMINERS, SHALL ACCOMPANY A CERTIFIED MINE
7 FOREMAN OR CERTIFIED ASSISTANT MINE FOREMAN FOR NOT LESS THAN
8 TWO WEEKS FOR TRAINING PURPOSES IN ACCORDANCE WITH A TRAINING
9 PROGRAM SUBMITTED BY THE OPERATOR AND APPROVED BY THE
10 DEPARTMENT. ANY APPLICANT WHO HAS BEEN GRANTED A MINE
11 OFFICIAL CERTIFICATE PRIOR TO THE EFFECTIVE DATE OF THIS ACT
12 NEED NOT UNDERGO THIS TRAINING. THE RECORD OF SUCH TRAINING
13 SHALL BE MAINTAINED AT THE MINE.

14 Section 203. Emergency use of mine examiner as assistant mine
15 foreman.

16 The mine foreman may appoint a mine examiner who is willing
17 to act as assistant mine foreman for not more than one month if
18 all of the following apply:

19 (1) There is an emergency. As used in this paragraph,
20 the term "emergency" means a condition which could not have
21 been foreseen and requires immediate action.

22 (2) There is no assistant mine foreman available in the
23 mine who is willing to act as an assistant mine foreman.

24 (3) A mine foreman may act as an assistant mine foreman,
25 a mine examiner or a miner. An assistant mine foreman may act
26 as a mine examiner or a miner. A mine examiner may act as a
27 miner.

28 (4) Foreman trainees, where used, shall not direct the
29 work force in matters involving directly or indirectly the
30 safety of employees nor make tests or examinations required

1 to be made by mine officials.

2 Section 204. Certification of miners.

3 No individual shall be employed or engaged as a miner in any
4 bituminous coal mine in this Commonwealth without first having
5 obtained a certificate of competency and qualification, except
6 that any miner holding such certificate may have a maximum of
7 two individuals working under his direction as noncertified
8 miners for the purpose of learning the business of mining, and
9 such noncertified miner or noncertified miners shall be
10 permitted to work under the direction of such miner without a
11 certificate. The miner shall provide adequate oversight to keep
12 the uncertified individual out of harm's way.

13 Section 205. Qualifications for certification as miners.

14 The following shall apply:

15 (1) Miners shall be examined and granted certificates
16 under regulations of the department.

17 (2) No individual shall be qualified to take the
18 examination unless the individual produces evidence of having
19 had not less than one year's experience in bituminous coal
20 mines.

21 (3) All individuals possessing certificates of
22 qualification issued by the Commonwealth entitling them to
23 act as mine foremen, assistant mine foremen, mine examiners
24 or mine electricians shall be eligible to engage at any time
25 as miners in bituminous coal mines of this Commonwealth.

26 Section 206. Issuance of miners' certificates.

27 The form and manner of issuing miners' certificates shall be
28 designated by the department. Certificates granted shall entitle
29 the certificate holder to be employed as and do the work of a
30 miner in the bituminous coal mines of this Commonwealth. A

1 certificate granted shall not be transferable and a transfer
2 shall be deemed a violation of this act.

3 Section 207. Certification of mining machine operators and
4 shot-firers.

5 (a) General rule.--It shall be unlawful to employ as a
6 mining machine operator or shot-firer in any bituminous coal
7 mine any individual who has not given evidence to the department
8 as to his fitness and competency to handle and use an approved
9 gas detection device and his ability to determine the presence
10 or absence of explosive gas and other dangerous conditions. The
11 manner of determining fitness and competency shall be prescribed
12 by the department. The department shall issue a certificate to
13 those found competent, on a form prescribed by the department.
14 The cost of the examination and certification shall be borne by
15 the candidates.

16 (b) Eligibility.--An individual possessing a certificate of
17 qualification issued by the Commonwealth entitling the
18 individual to act as a mine foreman, assistant mine foreman,
19 mine examiner or mine electrician is eligible to engage as a
20 mining machine operator in a bituminous coal mine.

21 Section 208. Employment of mine foremen.

22 In order to secure efficient management and proper
23 ventilation of mines, to promote the health and safety of
24 individuals employed in mines and to protect and preserve the
25 property connected with mines, the operator or superintendent
26 shall employ a competent and practical mine foreman for every
27 mine, who shall be under the supervision and control of the
28 operator or superintendent. The operator or superintendent of a
29 mine shall be held as fully responsible as the individual
30 appointed to act as mine foreman. The mine foreman shall have

1 full charge of all the inside workings and the individuals
2 employed in the mine, subject, however, to the supervision and
3 control of the operator or superintendent, in order that all the
4 provisions of this act so far as they relate to his duties shall
5 be complied with, and the regulations prescribed for each class
6 of workmen under his charge are carried out in the strictest
7 manner possible.

8 Section 209. Employment of mine electricians.

9 Each mine shall employ a certified mine electrician, who
10 shall have full charge of the electrical apparatus at the mine,
11 but shall be subject to the authority of the mine foreman. It
12 shall be the duty of the mine electrician to assist the mine
13 foreman in carrying out all the provisions of the bituminous
14 mining laws bearing on the use and installation of electricity
15 inside bituminous coal mines and the equipment powered thereby,
16 and the mine electrician shall be subject to the same penalties
17 as the mine foreman for any violation of these laws.

18 Section 210. Employment of assistant mine foremen.

19 When mine workings become so extensive that the mine foreman
20 is unable personally to carry out the requirements of this act
21 pertaining to duties, the mine foreman shall have the right to
22 employ a sufficient number of competent individuals to act as
23 his assistants, who shall be under his instruction and the
24 operator's or the superintendent's instruction in carrying out
25 the provisions of this act. In each mine the mine foreman's
26 assistants must possess assistant mine foreman certificates. In
27 case of the necessary temporary absence of the mine foreman, the
28 mine foreman may deputize his responsibilities, for the time
29 being, to an assistant mine foreman, who shall perform all the
30 duties of the mine foreman. Any mine foreman, assistant mine

1 foreman, mine examiner or mine electrician may supervise and
2 direct the work of a maximum of two noncertified miners, and
3 shall instruct the individuals how safely and properly to
4 perform their work.

5 Section 211. Ventilation responsibilities of mine foreman.

6 The following shall apply:

7 (1) A mine foreman shall devote the whole of his time to
8 his duties in the mine when the mine is in operation, shall
9 keep careful watch over the ventilating apparatus, the
10 ventilation, airways and travelways and shall see that all
11 stoppings along airways are properly built.

12 (2) A mine foreman shall ensure that proper cut-throughs
13 are made in the pillars of all rooms and entries, and that
14 they are closed when necessary or when required by the
15 department, so that the ventilating current can be conducted
16 in sufficient quantity through the last cut-through to the
17 face of each room and entry. A mine foreman shall not permit
18 any room or entry to be turned in advance of the ventilating
19 current or in advance of the last cut-through in the entry.

20 (3) A mine foreman or an assistant mine foreman shall
21 measure the air current at or near the main inlet and outlet
22 airway at least once each week, and also in the last cut-
23 through in the last room and in the entry beyond the last
24 room turned in each entry. A record shall be made of daily
25 measurements in the assistant mine foreman's daily report
26 book. The measurements shall be taken on days when
27 individuals are at work, and for making the measurements an
28 anemometer shall be provided and kept in good condition by
29 the superintendent of the mine.

30 (4) The following pertain to fan stoppage:

1 (i) If a main mine fan stops and the ventilating
2 quantity provided by the fan is not maintained by a
3 backup fan system, the following actions shall be taken:

4 (A) The power inby the loading point shall be
5 immediately disconnected and all men shall be
6 withdrawn from the face areas of the mine to a point
7 out by the loading point on the main travelway with
8 established communications.

9 (B) As soon as it is known that the ventilation
10 has been interrupted, all permissible battery-powered
11 equipment shall be removed from the immediate face
12 area and moved to a safe location out by the last
13 open crosscut. All other battery-powered mobile
14 equipment, except transportation equipment necessary
15 for evacuation if located in a safe area, shall not
16 be used after a ventilation interruption occurs. If
17 possible, battery terminal leads shall be
18 disconnected. If leads are not disconnected, all
19 switches shall be turned off.

20 (C) If the interruption is less than 15 minutes,
21 the working places, adjacent places and all other
22 active working areas where methane may accumulate
23 will be examined by a certified mine foreman,
24 assistant mine foreman or mine examiner to determine
25 if methane in the amount of 1.0 volume percent or
26 more exists before power is restored and the men are
27 permitted to resume mining operations.

28 (ii) If the ventilation is not restored within 15
29 minutes, the following precautions shall be taken:

30 (A) The power to all underground areas shall be

1 disconnected.

2 (B) All individuals shall be withdrawn from the
3 mine on foot under proper supervision.

4 (C) If ventilation is restored before the
5 evacuation is completed, the certified mine foreman,
6 assistant mine foreman or mine examiner may start the
7 reexamination of the mine, but all other individuals
8 must continue to evacuate.

9 (D) In order to provide for worker safety, power
10 for communications may be left on.

11 (iii) As an alternative to evacuating the men on
12 foot, a mine operator may propose to utilize mechanical
13 equipment during the evacuation. To justify this proposal
14 the operator must perform a survey that shows explosive
15 gas will not migrate to or accumulate in the designated
16 haulageways that will be used to evacuate the mine. The
17 duration of the survey shall be at least twice the travel
18 time from the farthest face to the surface. The operator
19 shall provide the representative of the miners, if
20 applicable, an opportunity to participate in the survey.
21 The department will approve the survey criteria. Trolley
22 equipment will not be used during a fan stoppage. If the
23 survey provides affirmative results, which shall be
24 provided to the department, the department shall approve
25 a plan that provides:

26 (A) That permissible transportation equipment
27 shall be used if available.

28 (B) That evacuations shall begin within 15
29 minutes after a ventilation interruption and shall
30 proceed in an orderly and expedient manner.

1 (C) That the minimum number of vehicles will be
2 used for the evacuation.

3 (D) That, during transportation, a certified
4 individual qualified to perform methane examinations
5 riding in each vehicle shall continuously monitor for
6 methane using a handheld detector and at specific
7 locations designated by the operator based on the
8 survey results. The speed of the vehicles shall not
9 be so fast as to negate the detector's ability to
10 accurately measure methane levels.

11 (E) That, if at any time during the evacuation
12 methane is detected in an amount of .25% or more, the
13 transportation vehicles will be deenergized and the
14 evacuation completed on foot.

15 (F) That the operator, the department and the
16 representative of the miners, if applicable, shall
17 review the plan annually or more frequently if
18 conditions warrant.

19 (iv) If ventilation is restored to normal water
20 gauge before the evacuation is completed, a certified
21 mine foreman, assistant mine foreman or mine examiner may
22 start the reexamination of the mine, but all other
23 individuals must continue to evacuate.

24 (v) The reexamination shall be made of the mine in
25 the same manner as a preshift examination for a coal-
26 producing shift before any power underground is
27 energized, including battery-powered or diesel-powered
28 equipment, or before individuals are permitted to enter
29 the mine. The examination shall be made on foot, except
30 an operator may use permissible transportation equipment

1 on intake travelways only for reexamination after a fan
2 stoppage if the examination is started within the time
3 period established by the survey. The examination shall
4 be recorded in the official mine record books used for
5 examinations under section 218.

6 (5) The mine foreman shall notify the superintendent in
7 writing whenever in his opinion the mine is becoming
8 dangerous through the lack of ample ventilation at the face
9 of entries, rooms and other portions of the mine, caused by
10 the undue length of entries and airways or from any other
11 cause, resulting in the accumulation of gas or coal dust, or
12 both, in various portions of the mine. The superintendent
13 shall thoroughly investigate the mine foreman's report and,
14 if substantiated, order necessary work done to put the
15 affected area in safe operating condition. It shall be the
16 duty of the superintendent to immediately notify the
17 department of the condition.

18 (6) The mine foreman shall see that every mine releasing
19 explosive gas is kept free of standing methane, but any
20 accumulation of explosive or noxious gases in the worked-out
21 or abandoned portions of any mine shall be removed as soon as
22 possible after its discovery, if it is practicable to remove
23 it. No individual endangered by the presence of explosive or
24 noxious gases shall be allowed in that portion of the mine
25 until the gases have been removed. The mine foreman shall
26 direct and see that all dangerous places and the entrance or
27 entrances to worked-out and abandoned places in all mines are
28 properly fenced off across the openings so that no individual
29 can enter, and that danger signs are posted upon said fencing
30 to warn individuals of the existing danger.

1 (7) When operations are temporarily suspended in a mine,
2 the mine foreman shall see that danger signs are placed
3 across the mine entrance, which signals shall be sufficient
4 warning for unauthorized individuals not to enter the mine.
5 If the circulation of air through the mine be stopped, each
6 entrance to the mine shall be fenced off in such a manner as
7 will ordinarily prevent individuals from entering the mine,
8 and a danger sign shall be displayed upon the fence at each
9 entrance and maintained in good condition. The mine foreman
10 shall see that all danger signs used in the mine are in good
11 condition and if any become defective, he shall notify the
12 superintendent.

13 Section 212. Mine foreman's responsibility for working place
14 safety.

15 The following shall apply:

16 (1) The mine foreman or assistant mine foreman shall
17 direct and see that every working place is properly secured
18 and shall see that no individual is directed or permitted to
19 work in an unsafe place, unless it be for the purpose of
20 making it safe. The mine foreman shall see that workmen are
21 provided with sufficient roof support materials delivered to
22 their working place or places. When timbers are used for roof
23 support, they shall be cut square on both ends and as near as
24 practicable to proper length.

25 (2) EVERY WORKMAN IN NEED OF ROOF SUPPORT MATERIALS ←—
26 SHALL NOTIFY THE MINE FOREMAN OR THE ASSISTANT MINE FOREMAN
27 OF THE FACT AT LEAST ONE DAY IN ADVANCE, STATING THE ROOF
28 SUPPORT MATERIALS ARE REQUIRED. In case of emergency, roof
29 support materials may be ordered immediately upon the
30 discovery of danger. If for any reason the necessary roof

1 support materials cannot be supplied when required, the mine
2 foreman or assistant mine foreman shall instruct the workmen
3 to vacate the place until the material needed is supplied.

4 (3) The mine foreman or assistant mine foreman shall
5 direct and see that, as the miners advance in their
6 excavation, all dangerous and doubtful pieces of coal, slate
7 and rock are taken down or immediately carefully secured
8 against falling on the workmen. Any workman who neglects to
9 carry out or disobeys the instructions of the mine foreman or
10 assistant mine foreman, in regard to securing his working
11 place, shall be suspended or discharged by the mine foreman,
12 and if such negligence or disobedience results in serious
13 injury or loss of life to any individual, the mine foreman
14 shall report the name of that workman to the department for
15 prosecution under the requirements of this act.

16 (4) The mine foreman shall give prompt attention to the
17 removal of all dangers reported to him by his assistants, the
18 mine examiner or any other individual working in the mine,
19 and in case it is impracticable to immediately remove the
20 danger, he shall notify every individual whose safety is
21 threatened to remain away from the area of the mine where the
22 dangerous conditions exist.

23 (5) The mine foreman, his assistant or the mine examiner
24 shall, once each week, travel and examine all the air courses
25 and openings that give access to old workings or falls and
26 make a record in ink of the condition of all places in the
27 book provided for that purpose.

28 (6) It shall be the duty of the mine foreman to see that
29 approved gas detection devices are used when and where
30 required by this act. No approved gas detection device shall

1 be entrusted to any individual for use in a mine until the
2 individual has given satisfactory evidence to the mine
3 foreman that he understands the proper use of the device and
4 the danger of tampering with the device. The transportation
5 of tools into and out of the mine shall be under the
6 direction of the mine foreman or an assistant mine foreman.

7 (7) Instructions shall be given by the mine foreman,
8 assistant mine foreman or mine examiner, or other authorized
9 individual, as to when, where and how roof supports shall be
10 placed in order to avoid accidents from falls and to mine
11 coal with safety to themselves and others. In addition, the
12 mine foreman or assistant mine foreman shall give special
13 care and attention to drawing pillars, particularly when
14 falls are thereby being made.

15 Section 213. Mine foreman's responsibilities for blasting.

16 The following shall apply:

17 (1) The mine foreman shall direct that the coal is
18 properly mined before it is blasted, shot or broken. For
19 purposes of this paragraph, the term "properly mined" shall
20 mean that the coal shall be undercut, centercut, overcut or
21 sheared by pick or machine, and in any case the cutting shall
22 be as deep as the holes are laid.

23 (2) The mine foreman or assistant mine foreman, under
24 instructions from the mine foreman, shall direct that the
25 holes for blasting shall be properly placed and shall
26 designate the angle and depth of holes, which shall not be
27 deeper than the undercutting, centercutting, overcutting or
28 shearing, the maximum quantity of explosives required for
29 each hole and the method of charging and tamping.

30 (3) The mine foreman shall employ a sufficient number of

1 competent and legally certified individuals to act as shot-
2 firers.

3 Section 214. Mine foreman's responsibilities for drainage.

4 The following shall apply:

5 (1) The mine foreman shall see that the work areas are
6 kept as free from water as practicable during working hours.
7 Except for individuals necessary to correct the condition,
8 individuals shall not enter an area with such accumulations.

9 (2) Whenever any working place in a mine approaches
10 within 50 feet of abandoned workings, as shown by surveys
11 certified by a registered engineer or surveyor, or within 500
12 feet of any other abandoned workings of the mine, which
13 cannot be inspected and which may contain dangerous
14 accumulations of water or gas, or within 500 feet of any
15 workings of an adjacent mine, a test drilling plan which
16 provides for the safety of all individuals must be submitted
17 by the operator to the department for approval. The
18 department may increase the setback distances under this
19 paragraph.

20 (3) No mining may occur within the setback distances
21 under paragraph (2) unless the department approves the test
22 drilling plan and gives permission to proceed.

23 (4) No water or gas from any portion of an abandoned
24 mine, or from any idle portion of an active mine, and no
25 borehole from the surface shall be tapped except under the
26 immediate instruction and direction of the mine foreman with
27 the use of approved gas detection equipment. It shall be
28 unlawful to work or employ individuals to work in any portion
29 of a bituminous coal mine in which a body of water is dammed
30 or held back at a higher elevation in the same mine by

1 natural or artificial means, unless approval is given in
2 writing by the department.

3 (5) The department shall not accept from an operator a
4 six-month mine subsidence map as required by the act of April
5 27, 1966 (1st Sp.Sess. P.L.31, No.1), known as The Bituminous
6 Mine Subsidence and Land Conservation Act, unless the map
7 includes the information required by paragraphs (2), (3) and
8 (4).

9 Section 215. Mine foreman's responsibility for employment of
10 competent individuals.

11 A noncertified individual may not be employed to operate
12 equipment in a mine until the individual has completed a
13 training program approved by the department and has given the
14 mine foreman satisfactory proof that the individual can do the
15 assigned work without endangering anyone.

16 Section 216. Mine foreman's responsibilities for inspections
17 and reports.

18 The following shall apply:

19 (1) In all mines, the mine foreman shall employ a
20 sufficient number of assistants to ensure a visit to each
21 employee during each shift, except mine officials and miners
22 whose normal duties require travel throughout the mine,
23 either by the mine foreman or his assistants.

24 (2) The mine foreman shall each day enter plainly and
25 sign in ink a report of the condition of the mine in a book
26 provided for that purpose. The report shall clearly state any
27 danger that may have come under his observation during the
28 day or any danger reported by the assistant mine foreman or
29 the mine examiners. The report shall also state whether or
30 not a proper supply of material is on hand for the safe

1 working of the mine, and whether or not the requirements of
2 law are complied with. The mine foreman shall also, once each
3 week, enter plainly in ink in the book a true report of all
4 weekly air measurements required by this act, designating the
5 place, the area of each cut-through and entry separately, the
6 velocity of the air in each cut-through and entry, the
7 quantity of the air in each cut-through and entry and the
8 number employed in each separate split of air, with the date
9 when measurements were taken. The book shall at all times be
10 kept in the mine office, for examination by the department or
11 any individual working in the mine, in the presence of the
12 superintendent or the mine foreman. The mine foreman shall
13 also each day read carefully and countersign in ink all
14 reports entered in the record book of the mine examiners.

15 (3) When assistant mine foremen are employed, their duty
16 shall be to assist the mine foreman in complying with the
17 provisions of this act, and they shall be liable to the same
18 penalties as the mine foreman for any violation of this act
19 in parts or portions of the mine under their jurisdiction. At
20 the end of each shift, each assistant mine foreman shall make
21 a report in a book provided for that purpose, giving the
22 general condition as to safety of the working places visited,
23 and shall make a note of any unusual occurrence observed
24 during the shift. The mine foreman shall read carefully the
25 daily report of each assistant mine foreman and shall sign
26 the report in ink daily. Where more than one portal is being
27 used for the entrance of miners into a mine, the mine foreman
28 may designate an assistant who holds a mine foreman
29 certificate to sign the assistant mine foreman's and mine
30 examiner's daily report books at each portal other than the

1 main portal.

2 (4) It shall be the duty of the mine foreman or
3 assistant mine foreman, or an authorized individual
4 designated by the mine foreman, to examine daily in a general
5 way all electrical equipment and other machinery under his
6 jurisdiction to see that it is in safe operating condition
7 and make a report in the assistant mine foreman's daily
8 report book. It shall be the duty of the mine electrician to
9 make and sign a written report once each week in a record
10 book provided for that purpose, stating the condition of
11 electrical equipment and other machinery in the mine. The
12 report shall be countersigned by the mine foreman.

13 Section 217. Employment of mine examiners.

14 The mine foreman shall employ a sufficient number of mine
15 examiners to ensure that each mine can be examined in accordance
16 with the provisions of this act. The mine foreman or the
17 assistant mine foreman shall ensure that the mine examiner has
18 initialed, including date and time, the places examined or
19 reported as examined.

20 ~~Section 218. Duties of mine examiners.~~ <—

21 ~~(a) Examination of mine. Within three hours immediately~~ <—
22 ~~preceding the beginning of a shift in a bituminous coal mine in~~
23 ~~this Commonwealth, and before workmen of the shift, other than~~
24 ~~those who may be designated to make the examinations prescribed~~
25 ~~in this section, enter the underground areas of the mine,~~
26 ~~certified individuals designated by the mine foreman to make an~~
27 ~~examination shall conduct an examination of the areas as~~
28 ~~prescribed in this section. Each person designated to act as a~~
29 ~~mine examiner shall be directed to examine a definite~~
30 ~~underground area of the mine, and in making his examination, the~~

1 ~~mine examiner shall inspect every active working place and~~
2 ~~immediately adjacent places in the area and make tests with an~~
3 ~~approved gas detection device for accumulations of methane and~~
4 ~~oxygen deficiency in the air.~~

5 ~~(b) Duties of mine examiner. The mine examiner shall:~~

6 ~~(1) Examine seals and doors to determine whether they~~
7 ~~are functioning properly.~~

8 ~~(2) Inspect and test the roof, face and rib conditions~~
9 ~~in the working places.~~

10 ~~(3) Inspect active roadways, every unfenced roadway,~~
11 ~~travelways, approaches to abandoned workings and accessible~~
12 ~~falls in active sections for explosive gas and other hazards.~~

13 ~~(4) Inspect to determine whether the air in each split~~
14 ~~is traveling in its proper course and in normal volume.~~

15 ~~(5) Initial and date at or near the face of each place~~
16 ~~examined.~~

17 ~~(6) Indicate a dangerous place if, in making an~~
18 ~~examination, the mine examiner finds a condition which he~~
19 ~~considers dangerous to individuals who may enter the area, by~~
20 ~~posting a "danger" sign conspicuously at a point which~~
21 ~~individuals entering such dangerous place are required to~~
22 ~~pass. No individual, other than Federal or State mine~~
23 ~~inspectors, or the mine foreman or assistant mine foreman, or~~
24 ~~individuals authorized by the mine foreman or assistant mine~~
25 ~~foreman or the representative of the miners shall be~~
26 ~~permitted to enter the dangerous place while the sign is~~
27 ~~posted, except those miners assigned to eliminate the~~
28 ~~dangerous condition.~~

29 ~~(7) Immediately report danger and its location to the~~
30 ~~mine foreman, if danger has been discovered.~~

1 ~~(8) Sign the report entered in the record book in the~~
2 ~~mine office on the surface when a station is located in a~~
3 ~~mine.~~

4 ~~(c) Record book. At every mine where mine examiners are~~
5 ~~employed, a suitable record book shall be kept at the mine~~
6 ~~office located on the surface. Immediately after the examination~~
7 ~~of a mine or any portion of the mine by the mine examiner, the~~
8 ~~mine examiner shall enter in the record book, in ink, a record~~
9 ~~of the examination and sign the record book. The record book~~
10 ~~shall be kept in a fire proof vault. The record shall:~~

11 ~~(1) Show the time taken in making the examination.~~

12 ~~(2) Clearly state the nature and location of dangerous~~
13 ~~or potentially dangerous conditions that may have been~~
14 ~~discovered in any room or entry or other place in the mine.~~

15 ~~(d) Prohibitions. No individual shall enter the mine until~~
16 ~~the mine examiners return to the mine office or to a station~~
17 ~~location in the intake entry of the mine, and report to the mine~~
18 ~~foreman or the assistant mine foreman, by telephone or~~
19 ~~otherwise, that the mine is in safe condition for individuals to~~
20 ~~enter. No individual on a non coal producing shift, other than a~~
21 ~~certified individual designated under this paragraph, shall~~
22 ~~enter any underground area in a mine, unless the area, which~~
23 ~~shall include all places on that particular split of air, has~~
24 ~~been examined as prescribed in this subsection within three~~
25 ~~hours immediately preceding his entrance into such area.~~

26 ~~(e) Written report. A written report shall be made of the~~
27 ~~communication made under subsection (d) by the person receiving~~
28 ~~the report.~~

29 ~~(f) Access to record books. At all times during working~~
30 ~~hours, the record books of the mine examiners shall be~~

1 accessible to:

2 (1) ~~The mine inspector.~~

3 (2) ~~Any individual working in the mine.~~

4 (3) ~~Authorized representatives of the miners.~~

5 (g) ~~Second examination. A second examination by the same or~~
6 ~~other mine examiner shall be made during working hours of every~~
7 ~~working place where miners are employed. A report of the~~
8 ~~examination shall be made in the mine examiner record book in~~
9 ~~the same manner as the first examination.~~

10 (A) ~~EXAMINATION OF MINE. WITHIN THREE HOURS IMMEDIATELY~~ <—
11 ~~PRECEDING THE BEGINNING OF A COAL PRODUCING SHIFT AND BEFORE ANY~~
12 ~~WORKMEN IN SUCH SHIFT, OTHER THAN THOSE WHO MAY BE DESIGNATED TO~~
13 ~~MAKE THE EXAMINATION UNDER THIS SECTION, ENTER THE UNDERGROUND~~
14 ~~AREAS OF THE MINE, THE MINE FOREMAN, ASSISTANT MINE FOREMAN OR~~
15 ~~MINE EXAMINER DESIGNATED BY THE MINE FOREMAN SHALL MAKE AN~~
16 ~~EXAMINATION OF THE AREAS AS PRESCRIBED IN THIS SECTION. EACH~~
17 ~~INDIVIDUAL DESIGNATED TO ACT AS A MINE EXAMINER SHALL BE~~
18 ~~DIRECTED TO EXAMINE A DEFINITE UNDERGROUND AREA OF THE MINE AND~~
19 ~~SHALL INSPECT EVERY ACTIVE WORKING PLACE AND PLACES IMMEDIATELY~~
20 ~~ADJACENT IN THE AREA AND MAKE TESTS WITH AN APPROVED GAS~~
21 ~~DETECTION DEVICE FOR ACCUMULATIONS OF METHANE AND OXYGEN~~
22 ~~DEFICIENCY IN THE AIR. THE MINE EXAMINER SHALL EXAMINE SEALS AND~~
23 ~~DOORS TO DETERMINE WHETHER THEY ARE FUNCTIONING PROPERLY;~~
24 ~~INSPECT AND TEST THE ROOF, FACE AND RIB CONDITIONS IN THE~~
25 ~~WORKING PLACES; INSPECT ACTIVE ROADWAYS, EVERY UNFENCED ROADWAY,~~
26 ~~TRAVELWAYS, APPROACHES TO ABANDONED WORKINGS, AND ACCESSIBLE~~
27 ~~FALLS IN ACTIVE SECTIONS FOR EXPLOSIVE GAS AND OTHER HAZARDS;~~
28 ~~AND INSPECT TO DETERMINE WHETHER THE AIR IN EACH SPLIT IS~~
29 ~~TRAVELING IN ITS PROPER COURSE AND IN NORMAL VOLUME. THE MINE~~
30 ~~EXAMINER SHALL INITIAL AND DATE THE FACE OF EACH PLACE HE~~

1 ~~EXAMINES OR IN A NEARBY LOCATION. IF THE MINE EXAMINER FINDS A~~
2 ~~CONDITION WHICH THE MINE EXAMINER CONSIDERS TO BE DANGEROUS TO~~
3 ~~INDIVIDUALS WHO MAY ENTER OR BE IN SUCH AREA, HE SHALL POST A~~
4 ~~"DANGER" SIGN CONSPICUOUSLY AT A POINT WHICH INDIVIDUALS~~
5 ~~ENTERING SUCH DANGEROUS PLACE WOULD BE REQUIRED TO PASS. NO~~
6 ~~INDIVIDUAL, OTHER THAN FEDERAL OR STATE MINE INSPECTORS, OR THE~~
7 ~~MINE FOREMAN OR ASSISTANT MINE FOREMAN, OR INDIVIDUALS~~
8 ~~AUTHORIZED BY THE MINE FOREMAN OR ASSISTANT MINE FOREMAN TO~~
9 ~~ENTER THE PLACE FOR THE PURPOSE OF ELIMINATING THE DANGEROUS~~
10 ~~CONDITION, SHALL ENTER THE PLACE WHILE THE SIGN IS POSTED.~~

11 ~~(B) RECORD BOOK. A SUITABLE RECORD BOOK SHALL BE KEPT AT~~
12 ~~THE MINE OFFICE, ON THE SURFACE, OF EVERY MINE WHERE MINE~~
13 ~~EXAMINERS ARE EMPLOYED, AND IMMEDIATELY AFTER THE EXAMINATION OF~~
14 ~~THE MINE OR ANY PORTION THEREOF BY A MINE EXAMINER, WHOSE DUTY~~
15 ~~IT IS TO MAKE THE EXAMINATION, HE SHALL ENTER IN THE BOOK, WITH~~
16 ~~INK, A RECORD OF THE EXAMINATION, AND SIGN THE SAME. THIS RECORD~~
17 ~~SHALL SHOW THE TIME TAKEN IN MAKING THE EXAMINATION, AND ALSO~~
18 ~~CLEARLY STATE THE NATURE AND LOCATION OF ANY DANGER THAT MAY~~
19 ~~HAVE BEEN DISCOVERED IN ANY ROOM OR ENTRY OR OTHER PLACE IN THE~~
20 ~~MINE, AND IF ANY DANGER HAS BEEN DISCOVERED, THE MINE EXAMINERS~~
21 ~~SHALL IMMEDIATELY REPORT THE LOCATION THEREOF TO THE MINE~~
22 ~~FOREMAN. NO INDIVIDUAL SHALL ENTER THE MINE UNTIL THE MINE~~
23 ~~EXAMINERS RETURN TO THE MINE OFFICE ON THE SURFACE, OR TO A~~
24 ~~STATION LOCATED IN THE INTAKE ENTRY OF THE MINE, WHERE A RECORD~~
25 ~~BOOK AS PROVIDED FOR IN THIS SECTION SHALL BE KEPT IN A~~
26 ~~FIREPROOF VAULT AND SIGNED BY THE INDIVIDUAL MAKING THE~~
27 ~~EXAMINATION, AND REPORT TO THE MINE FOREMAN OR THE ASSISTANT~~
28 ~~MINE FOREMAN, BY TELEPHONE OR OTHERWISE, AND A WRITTEN REPORT~~
29 ~~MADE THEREOF BY THE INDIVIDUAL RECEIVING THE REPORT, THAT THE~~
30 ~~MINE IS IN SAFE CONDITION FOR INDIVIDUALS TO ENTER. WHEN A~~

1 ~~STATION IS LOCATED IN ANY MINE, IT SHALL BE THE DUTY OF THE MINE~~
2 ~~EXAMINERS TO SIGN THE REPORT ENTERED IN THE RECORD BOOK IN THE~~
3 ~~MINE OFFICE ON THE SURFACE. THE RECORD BOOKS OF THE MINE~~
4 ~~EXAMINERS SHALL AT ALL TIMES DURING WORKING HOURS BE ACCESSIBLE~~
5 ~~TO THE DEPARTMENT AND ANY INDIVIDUAL WORKING IN THE MINE.~~

6 ~~(C) SECOND EXAMINATION. A SECOND EXAMINATION BY THE SAME OR~~
7 ~~OTHER MINE EXAMINER SHALL BE MADE DURING WORKING HOURS OF EVERY~~
8 ~~WORKING PLACE WHERE MEN ARE EMPLOYED, AND A REPORT OF THE~~
9 ~~EXAMINATION SHALL BE MADE IN THE MINE EXAMINER REPORT BOOK IN~~
10 ~~THE SAME MANNER AS THE FIRST EXAMINATION. NO INDIVIDUAL ON A~~
11 ~~NONCOAL PRODUCING SHIFT, OTHER THAN A CERTIFIED INDIVIDUAL~~
12 ~~DESIGNATED UNDER THIS SECTION, SHALL ENTER ANY UNDERGROUND AREA~~
13 ~~IN A MINE, UNLESS THE AREA, WHICH SHALL INCLUDE ALL PLACES ON~~
14 ~~THAT PARTICULAR SPLIT OF AIR, HAS BEEN EXAMINED AS PRESCRIBED IN~~
15 ~~THIS SECTION WITHIN THREE HOURS IMMEDIATELY PRECEDING HIS~~
16 ~~ENTRANCE INTO THE AREA.~~

17 SECTION 218. PRESHIFT EXAMINATION AT FIXED INTERVALS. <—

18 (A) EXAMINATIONS AND INTERVALS.--

19 (1) EXCEPT AS PROVIDED IN PARAGRAPH (2), A CERTIFIED
20 PERSON DESIGNATED BY THE OPERATOR MUST MAKE A PRESHIFT
21 EXAMINATION WITHIN THREE HOURS PRECEDING THE BEGINNING OF ANY
22 EIGHT-HOUR INTERVAL DURING WHICH ANY PERSON IS SCHEDULED TO
23 WORK OR TRAVEL UNDERGROUND. NO PERSON OTHER THAN CERTIFIED
24 EXAMINERS MAY ENTER OR REMAIN IN ANY UNDERGROUND AREA UNLESS
25 A PRESHIFT EXAMINATION HAS BEEN COMPLETED FOR THE ESTABLISHED
26 EIGHT-HOUR INTERVAL. THE OPERATOR MUST ESTABLISH EIGHT-HOUR
27 INTERVALS OF TIME SUBJECT TO THE REQUIRED PRESHIFT
28 EXAMINATIONS.

29 (2) PRESHIFT EXAMINATIONS OF AREAS WHERE PUMPERS ARE
30 SCHEDULED TO WORK OR TRAVEL SHALL NOT BE REQUIRED PRIOR TO

1 THE PUMPER ENTERING THE AREAS IF THE PUMPER IS A CERTIFIED
2 PERSON AND THE PUMPER CONDUCTS AN EXAMINATION FOR HAZARDOUS
3 CONDITIONS, TESTS FOR METHANE AND OXYGEN DEFICIENCY AND
4 DETERMINES IF THE AIR IS MOVING IN ITS PROPER DIRECTION IN
5 THE AREA WHERE THE PUMPER WORKS OR TRAVELS. THE EXAMINATION
6 OF THE AREA MUST BE COMPLETED BEFORE THE PUMPER PERFORMS ANY
7 OTHER WORK. A RECORD OF ALL HAZARDOUS CONDITIONS FOUND BY THE
8 PUMPER SHALL BE MADE AND RETAINED IN A RECORD BOOK.

9 (B) DUTIES OF PERSON CONDUCTING PRESHIFT EXAMINATION.--THE
10 PERSON CONDUCTING THE PRESHIFT EXAMINATION SHALL EXAMINE FOR
11 HAZARDOUS CONDITIONS, TEST FOR METHANE AND OXYGEN DEFICIENCY AND
12 DETERMINE IF THE AIR IS MOVING IN ITS PROPER DIRECTION AND
13 VOLUME AT THE FOLLOWING LOCATIONS:

14 (1) ROADWAYS, TRAVELWAYS AND TRACK HAULAGEWAYS WHERE
15 PERSONS ARE SCHEDULED, PRIOR TO THE BEGINNING OF THE PRESHIFT
16 EXAMINATION, TO WORK OR TRAVEL DURING THE ONCOMING SHIFT.

17 (2) BELT CONVEYORS THAT WILL BE ENERGIZED DURING THE
18 ONCOMING SHIFT.

19 (3) WORKING SECTIONS AND AREAS WHERE MECHANIZED MINING
20 EQUIPMENT IS BEING INSTALLED OR REMOVED IF ANYONE IS
21 SCHEDULED TO WORK ON THE SECTION OR IN THE AREA DURING THE
22 ONCOMING SHIFT. THE SCOPE OF THE EXAMINATION SHALL INCLUDE
23 THE WORKING PLACES, APPROACHES TO WORKED-OUT AREAS AND
24 VENTILATION CONTROLS ON THESE SECTIONS AND IN THESE AREAS,
25 AND THE EXAMINATION SHALL INCLUDE TESTS OF THE ROOF, FACE AND
26 RIB CONDITIONS ON THESE SECTIONS AND IN THESE AREAS.

27 (4) APPROACHES TO WORKED-OUT AREAS ALONG INTAKE AIR
28 COURSES AND AT THE ENTRIES USED TO CARRY AIR INTO WORKED-OUT
29 AREAS IF THE INTAKE AIR PASSING THE APPROACHES IS USED TO
30 VENTILATE WORKING SECTIONS WHERE ANYONE IS SCHEDULED TO WORK

1 DURING THE ONCOMING SHIFT. THE EXAMINATION OF THE APPROACHES
2 TO THE WORKED-OUT AREAS SHALL BE MADE IN THE INTAKE AIR
3 COURSE IMMEDIATELY INBY AND OUTBY EACH ENTRY USED TO CARRY
4 AIR INTO THE WORKED-OUT AREA. AN EXAMINATION OF THE ENTRIES
5 USED TO CARRY AIR INTO THE WORKED-OUT AREAS SHALL BE
6 CONDUCTED AT A POINT IMMEDIATELY INBY THE INTERSECTION OF
7 EACH ENTRY WITH THE INTAKE AIR COURSE.

8 (5) AREAS WHERE TROLLEY WIRES OR TROLLEY FEEDER WIRES
9 ARE TO BE OR WILL REMAIN ENERGIZED DURING THE ONCOMING SHIFT.

10 (6) HIGH SPOTS ALONG INTAKE AIR COURSES WHERE METHANE IS
11 LIKELY TO ACCUMULATE, IF EQUIPMENT WILL BE OPERATED IN THE
12 AREA DURING THE SHIFT.

13 (7) UNDERGROUND TRANSFORMER STATIONS, BATTERY CHARGING
14 STATIONS, SUBSTATIONS, RECTIFIERS, ELECTRICALLY OPERATED
15 SUBMERSIBLE PUMPS, PERMISSIBLE PUMPS AND ASSOCIATED
16 PERMISSIBLE SWITCH GEAR, COMPRESSOR STATIONS THAT WILL BE
17 ENERGIZED DURING THE ONCOMING SHIFT, ELECTRICAL PUMPS LOCATED
18 ON OR NEAR THE SECTION OR THAT MOVE AS THE SECTION ADVANCES
19 AND RETREATS AND SMALL ELECTRICAL PORTABLE PUMPS.

20 (8) OTHER AREAS WHERE WORK OR TRAVEL DURING THE ONCOMING
21 SHIFT IS SCHEDULED PRIOR TO THE BEGINNING OF THE PRESHIFT
22 EXAMINATION.

23 (C) AIR VOLUME DETERMINATION.--THE PERSON CONDUCTING THE
24 PRESHIFT EXAMINATION SHALL DETERMINE THE VOLUME OF AIR ENTERING
25 EACH OF THE FOLLOWING AREAS IF ANYONE IS SCHEDULED TO WORK IN
26 THE AREAS DURING THE ONCOMING SHIFT:

27 (1) IN THE LAST OPEN CROSSCUT OF EACH SET OF ENTRIES OR
28 ROOMS ON EACH WORKING SECTION AND AREAS WHERE MECHANIZED
29 MINING EQUIPMENT IS BEING INSTALLED OR REMOVED. THE LAST OPEN
30 CROSSCUT IS THE CROSSCUT IN THE LINE OF PILLARS CONTAINING

1 THE PERMANENT STOPPINGS THAT SEPARATE THE INTAKE AIR COURSES
2 AND THE RETURN AIR COURSES.

3 (2) ON EACH LONGWALL OR SHORTWALL IN THE INTAKE ENTRY OR
4 ENTRIES AT THE INTAKE END OF THE LONGWALL OR SHORTWALL FACE
5 IMMEDIATELY OUTBY THE FACE AND THE VELOCITY OF AIR AT EACH
6 END OF THE FACE AT THE LOCATIONS SPECIFIED IN THE APPROVED
7 VENTILATION PLAN.

8 (3) AT THE INTAKE END OF ANY PILLAR LINE:

9 (I) IF A SINGLE SPLIT OF AIR IS USED, IN THE INTAKE
10 ENTRY FURTHEST FROM THE RETURN AIR COURSE, IMMEDIATELY
11 OUTBY THE FIRST OPEN CROSSCUT OUTBY THE LINE OF PILLARS
12 BEING MINED; OR

13 (II) IF A SPLIT SYSTEM IS USED, IN THE INTAKE
14 ENTRIES OF EACH SPLIT IMMEDIATELY INBY THE SPLIT POINT.

15 (D) CERTIFICATION.--AT EACH WORKING PLACE EXAMINED, THE
16 PERSON DOING THE PRESHIFT EXAMINATION SHALL CERTIFY BY INITIALS,
17 DATE AND THE TIME, THAT THE EXAMINATION WAS MADE. IN AREAS
18 REQUIRED TO BE EXAMINED OUTBY A WORKING SECTION, THE CERTIFIED
19 PERSON SHALL CERTIFY BY INITIALS, DATE AND THE TIME AT ENOUGH
20 LOCATIONS TO SHOW THAT THE ENTIRE AREA HAS BEEN EXAMINED.

21 (E) SIGN POSTING.--IF THE MINE EXAMINER IN MAKING HIS
22 EXAMINATION, FINDS A CONDITION WHICH HE CONSIDERS TO BE
23 DANGEROUS TO PERSONS WHO MAY ENTER OR BE IN SUCH AREA, THE MINE
24 EXAMINER SHALL INDICATE SUCH DANGEROUS PLACE BY POSTING A
25 "DANGER" SIGN CONSPICUOUSLY AT A POINT WHICH PERSONS ENTERING
26 SUCH DANGEROUS PLACE WOULD BE REQUIRED TO PASS. NO PERSON, OTHER
27 THAN FEDERAL OR STATE MINE INSPECTORS, OR THE MINE FOREMAN OR
28 HIS ASSISTANT, OR PERSONS AUTHORIZED BY THE MINE FOREMAN OR HIS
29 ASSISTANT TO ENTER SUCH PLACE FOR THE PURPOSE OF ELIMINATING THE
30 DANGEROUS CONDITION THEREIN, SHALL ENTER SUCH PLACE WHILE SUCH

1 SIGN IS POSTED.

2 (F) RECORDKEEPING.--A RECORD OF THE RESULTS OF EACH PRESHIFT
3 EXAMINATION, INCLUDING A RECORD OF HAZARDOUS CONDITIONS AND
4 THEIR LOCATIONS FOUND BY THE EXAMINER DURING EACH EXAMINATION
5 AND OF THE RESULTS AND LOCATIONS OF AIR AND METHANE
6 MEASUREMENTS, SHALL BE MADE ON THE SURFACE BEFORE ANY PERSONS,
7 OTHER THAN CERTIFIED PERSONS CONDUCTING EXAMINATIONS REQUIRED BY
8 THIS SUBPART, ENTER ANY UNDERGROUND AREA OF THE MINE. THE
9 RESULTS OF METHANE TESTS SHALL BE RECORDED AS THE PERCENTAGE OF
10 METHANE MEASURED BY THE EXAMINER. THE RECORD SHALL BE MADE BY
11 THE CERTIFIED PERSON WHO MADE THE EXAMINATION. IF THE EXAMINER
12 HAS CALLED OUT THE EXAMINATION FROM UNDERGROUND AND WILL NOT
13 COMPLETE SURFACE RECORD BOOKS PERSONALLY, THE EXAMINER SHALL
14 ENTER A RECORD OF EXAMINATION IN A RECORD BOOK KEPT IN A
15 FIREPROOF VAULT UNDERGROUND AND SIGN THE SAME. WHEN A STATION IS
16 LOCATED IN A MINE, IT SHALL BE THE DUTY OF A MINE EXAMINER TO
17 ALSO SIGN A REPORT ENTERED IN THE RECORD BOOK IN THE MINE OFFICE
18 ON THE SURFACE. A RECORD SHALL ALSO BE MADE BY A CERTIFIED
19 PERSON OF THE ACTION TAKEN TO CORRECT HAZARDOUS CONDITIONS FOUND
20 DURING THE PRESHIFT EXAMINATION. ALL PRESHIFT AND CORRECTIVE
21 ACTION RECORDS SHALL BE COUNTERSIGNED BY THE MINE FOREMAN OR
22 EQUIVALENT MINE OFFICIAL BY THE END OF THE MINE FOREMAN'S OR
23 EQUIVALENT MINE OFFICIAL'S NEXT REGULARLY SCHEDULED WORKING
24 SHIFT. THE RECORDS REQUIRED BY THIS SECTION SHALL BE MADE IN A
25 SECURE BOOK THAT IS NOT SUSCEPTIBLE TO ALTERATION OR
26 ELECTRONICALLY IN A COMPUTER SYSTEM SO AS TO BE SECURE AND NOT
27 SUSCEPTIBLE TO ALTERATION.

28 (G) SECOND EXAMINATION.--A SECOND EXAMINATION BY THE SAME OR
29 OTHER MINE EXAMINER SHALL BE MADE DURING WORKING HOURS OF EVERY
30 WORKING PLACE WHERE INDIVIDUALS ARE EMPLOYED, AND A REPORT OF

1 SAID EXAMINATION SHALL BE MADE IN THE MINE EXAMINER REPORT BOOK
2 IN THE SAME MANNER AS THE FIRST EXAMINATION.

3 (H) RETENTION PERIOD.--RECORDS SHALL BE RETAINED AT A
4 SURFACE LOCATION AT THE MINE FOR AT LEAST ONE YEAR AND SHALL BE
5 MADE AVAILABLE FOR INSPECTION BY THE MINE INSPECTOR AND THE
6 REPRESENTATIVE OF MINERS, IF APPLICABLE.

7 (I) ADDITIONAL EXAMINATION.--AN ADDITIONAL EXAMINATION OF
8 THE WORKING SECTION FOR PERSONS ENTERING THE MINE MORE THAN
9 THREE HOURS AFTER THE START OF AN EIGHT-HOUR CYCLE AND ENTERING
10 SUCH WORKING SECTION SHALL BE DONE IF PERSONS HAVE NOT BEEN
11 PRESENT IN SUCH WORKING SECTION DURING THE THREE-HOUR PERIOD
12 AFTER THE START OF THE EIGHT-HOUR PERIOD, PROVIDED THAT THE
13 ENTRY AFTER THE START OF THE EIGHT-HOUR CYCLE IS NOT OCCASIONED
14 BY TRAINING OF THE MINERS OR A FAN CHECK. A CERTIFIED PERSON
15 SHALL EXAMINE THE WORKING SECTION FOR HAZARDOUS CONDITIONS,
16 DETERMINE WHETHER THE AIR IS TRAVELING IN ITS PROPER DIRECTION
17 AND AT ITS NORMAL VOLUME AND TEST FOR METHANE AND OXYGEN
18 DEFICIENCY. SUCH EXAMINATION DOES NOT INCLUDE THE TRAVELWAYS TO
19 SUCH AREA WHERE PERSONS REGULARLY TRAVEL IN THE MINE.

20 (J) CERTIFICATION IN WORKING SECTION.--IN EACH WORKING
21 SECTION EXAMINED, THE PERSON DOING THE EXAMINATION SHALL CERTIFY
22 BY INITIALS, DATE AND THE TIME, THAT THE EXAMINATION WAS MADE.

23 (K) RECORDKEEPING.--A RECORD OF THE RESULTS OF EACH
24 EXAMINATION, INCLUDING A RECORD OF HAZARDOUS CONDITIONS AND
25 THEIR LOCATIONS FOUND BY THE EXAMINER DURING EACH EXAMINATION
26 AND OF THE RESULTS AND LOCATIONS OF AIR AND METHANE
27 MEASUREMENTS, SHALL BE MADE ON THE SURFACE BEFORE ANY PERSONS,
28 OTHER THAN CERTIFIED PERSONS CONDUCTING EXAMINATIONS, ENTER THE
29 WORKING SECTION. THE RESULTS OF METHANE TESTS SHALL BE RECORDED
30 AS THE PERCENTAGE OF METHANE MEASURED BY THE EXAMINER. THE

1 RECORD SHALL BE MADE BY THE CERTIFIED PERSON WHO MADE THE
2 EXAMINATION. IF THE EXAMINER HAS CALLED OUT HIS EXAMINATION FROM
3 UNDERGROUND AND WILL NOT COMPLETE SURFACE RECORD BOOKS
4 PERSONALLY, THE EXAMINER SHALL ENTER A RECORD OF EXAMINATION IN
5 A RECORD BOOK KEPT IN A FIREPROOF VAULT UNDERGROUND AND SIGN THE
6 SAME. WHEN A STATION IS LOCATED IN A MINE, IT SHALL BE THE DUTY
7 OF A MINE EXAMINER TO ALSO SIGN A REPORT ENTERED IN THE RECORD
8 BOOK IN THE MINE OFFICE ON THE SURFACE. A RECORD SHALL ALSO BE
9 MADE BY A CERTIFIED PERSON OF THE ACTION TAKEN TO CORRECT
10 HAZARDOUS CONDITIONS FOUND DURING THE EXAMINATION. ALL
11 EXAMINATIONS AND CORRECTIVE ACTION RECORDS SHALL BE
12 COUNTERSIGNED BY THE MINE FOREMAN OR EQUIVALENT MINE OFFICIAL BY
13 THE END OF THE MINE FOREMAN'S OR EQUIVALENT MINE OFFICIAL'S NEXT
14 REGULARLY SCHEDULED WORKING SHIFT. THE RECORDS REQUIRED BY THIS
15 SECTION SHALL BE MADE IN A SECURE BOOK THAT IS NOT SUSCEPTIBLE
16 TO ALTERATION OR ELECTRONICALLY IN A COMPUTER SYSTEM SO AS TO BE
17 SECURE AND NOT SUSCEPTIBLE TO ALTERATION.

18 (L) RETENTION PERIOD.--RECORDS SHALL BE RETAINED AT A
19 SURFACE LOCATION AT THE MINE FOR AT LEAST ONE YEAR AND SHALL BE
20 MADE AVAILABLE FOR INSPECTION BY THE MINE INSPECTOR AND THE
21 REPRESENTATIVE OF MINERS.

22 SECTION 218.1. SUPPLEMENTAL EXAMINATION.

23 (A) DUTIES.--EXCEPT FOR CERTIFIED PERSONS CONDUCTING
24 EXAMINATIONS REQUIRED BY THIS SUBSECTION, WITHIN THREE HOURS
25 BEFORE ANYONE ENTERS AN AREA IN WHICH A PRESHIFT EXAMINATION HAS
26 NOT BEEN MADE FOR THAT SHIFT, A CERTIFIED PERSON SHALL EXAMINE
27 THE AREA FOR HAZARDOUS CONDITIONS, DETERMINE WHETHER THE AIR IS
28 TRAVELING IN ITS PROPER DIRECTION AND AT ITS NORMAL VOLUME AND
29 TEST FOR METHANE AND OXYGEN DEFICIENCY.

30 (B) CERTIFICATION.--AT EACH WORKING PLACE EXAMINED, THE

1 PERSON MAKING THE SUPPLEMENTAL EXAMINATION SHALL CERTIFY BY
2 INITIALS, DATE AND THE TIME, THAT THE EXAMINATION WAS MADE. IN
3 AREAS REQUIRED TO BE EXAMINED OUTBY A WORKING SECTION, THE
4 CERTIFIED PERSON SHALL CERTIFY BY INITIALS, DATE AND THE TIME AT
5 ENOUGH LOCATIONS TO SHOW THAT THE ENTIRE AREA HAS BEEN EXAMINED.

6 (C) RECORDKEEPING.--A RECORD OF THE RESULTS OF EACH
7 EXAMINATION, INCLUDING A RECORD OF HAZARDOUS CONDITIONS AND
8 THEIR LOCATIONS FOUND BY THE EXAMINER DURING EACH EXAMINATION
9 AND OF THE RESULTS AND LOCATIONS OF AIR AND METHANE
10 MEASUREMENTS, SHALL BE MADE ON THE SURFACE BEFORE ANY PERSONS,
11 OTHER THAN CERTIFIED PERSONS CONDUCTING EXAMINATIONS, ENTER THE
12 WORKING AREA. THE RESULTS OF METHANE TESTS SHALL BE RECORDED AS
13 THE PERCENTAGE OF METHANE MEASURED BY THE EXAMINER. THE RECORD
14 SHALL BE MADE BY THE CERTIFIED PERSON WHO MADE THE EXAMINATION.
15 IF THE EXAMINER HAS CALLED OUT HIS EXAMINATION FROM UNDERGROUND
16 AND WILL NOT COMPLETE SURFACE RECORD BOOKS PERSONALLY, THE
17 EXAMINER SHALL ENTER A RECORD OF EXAMINATION IN A RECORD BOOK
18 KEPT IN A FIREPROOF VAULT UNDERGROUND AND SIGN THE SAME. WHEN A
19 STATION IS LOCATED IN A MINE, IT SHALL BE THE DUTY OF A MINE
20 EXAMINER TO ALSO SIGN A REPORT ENTERED IN THE RECORD BOOK IN THE
21 MINE OFFICE ON THE SURFACE. A RECORD SHALL ALSO BE MADE BY A
22 CERTIFIED PERSON OF THE ACTION TAKEN TO CORRECT HAZARDOUS
23 CONDITIONS FOUND DURING THE EXAMINATION. ALL EXAMINATIONS AND
24 CORRECTIVE ACTION RECORDS SHALL BE COUNTERSIGNED BY THE MINE
25 FOREMAN OR EQUIVALENT MINE OFFICIAL BY THE END OF THE MINE
26 FOREMAN'S OR EQUIVALENT MINE OFFICIAL'S NEXT REGULARLY SCHEDULED
27 WORKING SHIFT. THE RECORDS REQUIRED BY THIS SECTION SHALL BE
28 MADE IN A SECURE BOOK THAT IS NOT SUSCEPTIBLE TO ALTERATION OR
29 ELECTRONICALLY IN A COMPUTER SYSTEM SO AS TO BE SECURE AND NOT
30 SUSCEPTIBLE TO ALTERATION.

1 Section 219. Management of mine.

2 The right to hire and discharge employees, management of the
3 mine and the direction of the working forces are vested
4 exclusively in the operator. No individual, association,
5 organization or corporation shall interfere with or attempt to
6 interfere with, abridge or attempt to abridge, in any manner
7 whatsoever, these rights, provided that these rights do not
8 invalidate any existing or future contract.

9 Section 220. Duties of superintendent.

10 (a) General rule.--It shall be the duty of every
11 superintendent, on behalf and at the expense of the operator, to
12 keep on hand at each mine at all times a sufficient quantity of
13 all materials and supplies required to preserve the health and
14 safety of the employees, as ordered by the mine foreman and
15 required by this act. If, for any reason, the superintendent
16 cannot procure the necessary materials or supplies, he shall
17 immediately notify the mine foreman, whose duty it shall be to
18 withdraw all individuals from the mine, or portion of the mine,
19 until the materials or supplies are received.

20 (b) Examination.--The superintendent shall, at least once
21 every week, read, examine and countersign all reports entered in
22 the mine record book. If the superintendent determines that the
23 law is being violated, the superintendent shall order the mine
24 foreman to stop the violation and ensure compliance with that
25 order.

26 Section 221. Qualifications and general responsibility of
27 superintendent.

28 The following shall apply:

29 (1) Beginning one year after the effective date of this
30 paragraph, no individual may be appointed as a superintendent

1 at any mine in this Commonwealth unless the individual holds
2 a current, valid mine foreman certificate. In the event that
3 a superintendent is found by the department to be in breach
4 of his or her responsibilities as superintendent, the
5 department may suspend or revoke the superintendent's mine
6 foreman certificate.

7 (2) No individual may serve as the superintendent for
8 more than one mine.

9 (3) The superintendent shall not obstruct the mine
10 foreman or other official in the fulfillment of his duties as
11 required by this act. The superintendent shall ensure that
12 the mine foreman and all other employees of the mine comply
13 with the law. The superintendent shall immediately respond to
14 a violation of this act upon notification by the department.
15 The superintendent shall be responsible for all the outside
16 workings and all individuals employed at the mine. At a mine
17 where a superintendent is not employed, the mine foreman
18 shall have all the duties and responsibilities otherwise
19 given to the superintendent in addition to the regular duties
20 of the mine foreman.

21 Section 222. Danger signs.

22 The superintendent of every mine shall provide a sufficient
23 number of danger signs which the mine foreman or the assistant
24 mine foreman shall distribute in the mine at places convenient
25 for the use of the mine examiners and other officials in the
26 fulfillment of their duties. Danger signs in all mines shall be
27 uniform and of a design approved by the department. All danger
28 signs shall be kept in good condition and no defective sign
29 shall be used in any mine.

30 Section 223. Supply of record books.

1 The superintendent shall keep on hand at the mine a supply of
2 the record books required by this act and shall ensure that
3 record books are delivered to the proper individuals at the mine
4 and that they are properly cared for.

5 Section 224. Mapping requirements and surveying standards.

6 (a) General rule.--The operator or superintendent of each
7 mine shall cause to be made by a registered mining engineer or
8 registered professional surveyor an accurate, professional
9 quality map of the mine, on a scale of not less than 200 feet to
10 the inch. At a minimum, the map shall show:

11 (1) A complete legend identifying all features
12 represented on the map and a title block including all
13 changes of mine ownership and the dates of those changes.

14 (2) An accurate delineation of the current extent of the
15 workings of the mine and all mines or coal lands, or both,
16 inside the permit boundary and all mines or coal lands, or
17 both, within 1,000 feet of the outside of the permit
18 boundary. The delineation must show all workings of all mines
19 above and below the mine within the permit boundary and
20 within 1,000 feet of the outside of the permit boundary.

21 (3) Barrier pillars for all mine workings inside the
22 permit boundary and all mine workings adjacent to the permit
23 boundary.

24 (4) Two permanent baseline points coordinated with the
25 underground and surface traverse points, and two permanent
26 elevation benchmarks referencing mine elevation surveys. The
27 baseline points and elevation benchmarks shall be prepared
28 using the Pennsylvania State Plan Coordinate System (NAD83
29 Datum). In the alternative, the map shall include coordinate
30 transformation equations converting the baseline points shown

1 to correlate to the Pennsylvania State Plan Coordinate
2 System.

3 (5) All openings, excavations, shafts, slopes, drifts,
4 tunnels, entries, crosscuts, rooms, boreholes and all other
5 excavations, including surface pits and auger holes in each
6 seam.

7 (6) Areas where the pillars or longwall panels have been
8 removed.

9 (7) The name or number of each butt, room and section,
10 if available.

11 (8) Ventilation controls, air splits and the direction
12 of air currents using arrows.

13 (9) USGS elevation at the top and bottom of each shaft,
14 slope, drift and borehole.

15 (10) Bottom of coal elevations, taken at intervals not
16 to exceed 300 feet apart, in one entry of each section and in
17 one entry of each set of rooms off such sections.

18 (11) Bottom of coal elevations taken in the last open
19 crosscut of all sections and each set of rooms off such
20 section before they are abandoned.

21 (12) Elevation contour lines at whole number ten-foot
22 increments, unless the seam is steeply pitching, after which
23 it may be 25-foot intervals.

24 (13) The number or designation of each survey station
25 and the date of the last survey in the entries, as they are
26 represented on the map.

27 (14) The location and elevation of any body of water
28 dammed or held back in any portion of the mine, giving the
29 volume in gallons of the body of water.

30 (15) The location of streams, rivers, lakes, dams or any

1 other bodies of water on the surface, with their surface
2 elevations accurately and plainly marked.

3 (16) The location of permanent surface features such as
4 railroad tracks, public highways, permanent buildings and oil
5 and gas wells.

6 (17) All seals and bulkheads within the mine.

7 (b) Accuracy standards.--The following accuracy standards
8 must be met:

9 (1) A minimum elevation closure of plus or minus one
10 foot per 5,000 feet is required.

11 (2) Mine traverse, advanced by closed loop method of
12 survey or other equally accurate method of traversing.

13 Minimum angular and coordinate ties for raw data would be an
14 angular tie of less than one minute and a coordinate time of
15 greater than 1 to 10,000 for any given closed loop survey.

16 (c) Surveying standards.--The extent of surveying shown on
17 the map shall be acceptable where the following minimum
18 underground surveying standards are met:

19 (1) Every entry must be surveyed at intervals not to
20 exceed 300 lineal feet. Survey station spads shall be
21 established in each entry of all mains, sections, butts,
22 rooms and other excavations. Survey lines may extend from
23 adjacent entries as long as the interval between survey
24 station spads within an entry does not exceed 300 lineal
25 feet. Continuous survey lines must be maintained in at least
26 one entry.

27 (2) Lateral take-ups, left and right, must be taken in
28 every entry at all intersections and must denote the location
29 of all intersections and define the corners and the location
30 of the rib line within each entry. For any excavation greater

1 than 20% from the planned excavation, additional lateral
2 take-ups must be taken to define this area. All of the
3 information must be accurately portrayed on the mine map.

4 (3) All workings not surveyed and taken from a working
5 map or other unofficial record shall be shown on the map with
6 dashed lines. The legend shall identify that these areas have
7 not been surveyed.

8 (4) A survey station spad is required to be within 300
9 feet of the deepest penetration of the final faces of each
10 mining section, butt or room. The number or designation of
11 the last survey station spad and the date of such survey of
12 the entries are to be shown on the mine map. The area from
13 this spad to the face will be considered surveyed provided
14 that lateral and face take-ups have been completed and
15 recorded in the field book and shown on the mine map. Field
16 books shall be available for inspection. If lateral and face
17 take-ups are not completed, the area inby the last survey
18 station spad must be identified on the map with dashed lines.
19 The survey station spads located in each mining section, butt
20 or room shall be tied to a check survey station.

21 (5) Check survey stations shall be advanced to within
22 300 feet of the deepest penetration of all mains, submains,
23 sections and butts. Check survey stations shall be advanced
24 to within 600 feet of the deepest penetration of all rooms.

25 (6) Check survey stations shall be advanced to within
26 100 feet of the deepest penetration of all mining sections,
27 butts, rooms and excavations adjacent to the permit or
28 property boundary lines.

29 (d) Verification.--Prior to each area's being sealed, the
30 operator or superintendent shall verify in writing that the map

1 of the sealed area meets the requirements of this act. To the
2 extent that any areas in the mine cannot be surveyed, these
3 areas shall be indicated on the map.

4 Section 225. Availability of copy of map.

5 A true copy of the map made pursuant to section 224 shall be
6 kept in the mine office for the use of the mine officials and
7 department, and for the inspection, in the presence of the
8 superintendent or mine foreman, of any individual working in the
9 mine, or of authorized representatives of the employees of the
10 mine, whenever the individual or representative fears that any
11 working place is becoming dangerous by reason of its proximity
12 to other workings that may contain dangerous accumulations of
13 water or noxious gases.

14 Section 226. Excavations on map.

15 At least once every six months, the operator or
16 superintendent of every mine shall cause to be shown accurately
17 on the original map of the mine, and on the copy of the map in
18 the mine office, all the excavations made during the time that
19 elapsed since the excavations were last shown.

20 Section 227. Furnishing copies of maps.

21 A copy of the mine map shall be furnished every six months to
22 the department. When more than one seam of coal is being worked
23 in any mine, the department shall be provided with a separate
24 copy of the original map of the complete workings of each seam
25 as provided for under this act. The copies shall remain in the
26 care of the department. When one mine is working a seam of coal
27 under another mine that is working an overlying seam and the two
28 mines are operated by different operators, the operators shall
29 exchange with each other copies of their respective mine maps,
30 showing such portions of their respective mines as may be

1 directly above or below the other mine.

2 Section 228. Duties upon abandonment of mine.

3 (a) General rule.--If a mine is inactive for a period of 60
4 days or more or if the operator intends to cease ventilation of
5 the mine, the operator or the superintendent shall notify the
6 department at once and shall, within 60 days, extend the
7 official map to show clearly all worked-out or abandoned
8 territory with all excavations, property and boundary lines,
9 elevations and map features as required under this act or, if
10 the workings are not accessible, provide a copy of the most
11 recent map available that is clearly marked to state that the
12 workings shown were not surveyed. The owner or operator of the
13 mine shall also, within 45 days after its change in status, send
14 to the department a tracing, print or digital map in a format
15 acceptable to the department of the complete original map. The
16 registered mining engineer or registered surveyor shall certify
17 that the tracing, print or digital map is a true and correct
18 copy of the original map of the mine and that the original map
19 is a true, complete and correct map and survey of all the
20 excavations made in the inactive or abandoned mine. A dated
21 statement signed by a company or corporate officer stating that
22 the map represents a complete and accurate representation of all
23 underground excavations and is the final map of the mine, or
24 stating that the map provided is not a surveyed final map due to
25 inaccessibility of the workings, shall be included.

26 (b) Violation.--If the operator, superintendent or company
27 or corporate officer fails to provide the certified final map or
28 recklessly or intentionally submits an inaccurate certified map,
29 the violation shall be a felony subject to prosecution under
30 section 505. Costs incurred by the Commonwealth as a result of a

1 violation of this subsection may be recovered as restitution.

2 Section 229. Survey by department.

3 If the department has reasonable cause to believe that a map
4 of any mine furnished under the provisions of this act is
5 inaccurate or imperfect, the department may require the operator
6 to make a survey and a new map of the mine.

7 Section 230. Ventilation requirements.

8 (a) General rule.--The operator or superintendent of a mine
9 shall provide and maintain ample means of ventilation to furnish
10 a constant and adequate supply of pure air for the employees.
11 The quantity and velocity of the current of air shall be
12 sufficient to dilute so as to render harmless and carry away
13 flammable or harmful gases.

14 (b) Specification.--The quantity of air reaching the last
15 open crosscut in any pair or set of entries shall not be less
16 than 9,000 cubic feet per minute. All active underground work
17 areas in a mine shall be ventilated by a current of air
18 containing not less than 19.5% oxygen and not more than .5%
19 carbon dioxide and no harmful quantities of other noxious or
20 poisonous gases.

21 (c) Ventilating belt entries.--A belt conveyor entry shall
22 be isolated from the adjacent entries.

23 (1) The following requirements apply:

24 (i) The quantity of air traveling in the belt
25 conveyor shall be kept to the minimum quantity necessary
26 for effective ventilation by means of permanent stoppings
27 and regulators.

28 (ii) The belt conveyor entry shall be provided with
29 a separate split of intake air.

30 (iii) The belt conveyor entry shall provide an

1 intake escapeway to the main air current.

2 (2) If an operator proposes to use entries in common
3 with the belt conveyor entry, the operator must submit a plan
4 to and obtain approval by the department that addresses the
5 following criteria:

6 (i) The belt conveyor is cleaned and maintained to
7 minimize float dust in the common entries.

8 (ii) Stoppings and regulators are arranged to reduce
9 the quantity of air traveling in the belt and common
10 entries to a minimum for effective ventilation of the
11 belt and common entries and to provide an intake air
12 split as an escapeway to the main air current.

13 (iii) Fire protection is installed and maintained on
14 all belt conveyors in compliance with appropriate
15 standards.

16 (iv) There is an early warning fire detection system
17 and carbon monoxide (CO) or smoke sensors that meet the
18 requirements of 30 CFR § 75.351 (relating to atmospheric
19 monitoring systems). The spacing of the CO/smoke sensors
20 shall not exceed 1,000 feet. The belt air velocity shall
21 be a minimum of 50 fpm or CO/smoke sensor spacing shall
22 be reduced to provide an adequate alarm time not to
23 exceed 20 minutes. The CO/smoke sensors shall be set to
24 alarm at the lowest practicable setting and be positioned
25 in the ventilation current to provide the most effective
26 detection.

27 (v) The number of common entries may not exceed
28 three entries, including the belt entry.

29 (vi) Development for common entries is designed to
30 be at a lower ventilation pressure than the main intake

1 escapeway.

2 (vii) If a condition develops that causes the belt
3 and common entries to be at a higher ventilation pressure
4 than the main intake escapeway, efforts are undertaken to
5 immediately correct the condition. If the condition
6 cannot practicably be corrected, the mine operator must
7 notify the department of the condition, the specific
8 cause, the area affected and the steps that will be taken
9 to maintain the pressure in the belt and common entries
10 at the lowest attainable level.

11 (viii) When the belt ventilation current travels
12 away from the working section, no ignition sources,
13 except equipment necessary to maintain the escapeway and
14 personnel carriers, shall be permitted in the intake
15 escapeway unless CO/smoke sensors that meet Federal fire
16 detection standards are installed in the intake
17 escapeway. Equipment operated in the intake escapeway
18 shall be equipped with an automatic fire suppression
19 system, or comply with 30 CFR § 75.380(f)(4) (relating to
20 escapeways; bituminous and lignite mines). CO detectors
21 shall give an audible alarm over the mine communication
22 system. The alarm shall indicate the conveyor belt flight
23 where the alarm occurred. Both visual and audible alarm
24 signals must automatically be provided at all affected
25 working sections and affected areas where mechanized
26 mining equipment is being installed or removed and on the
27 surface at a monitored location. Two-way underground
28 communications shall be maintained between the monitored
29 surface location and all underground working sections and
30 areas where mechanized mining equipment is being

1 installed or removed.

2 (ix) A copy of the mine's federally approved
3 firefighting and evacuation plan is included with the
4 plan.

5 (d) Actions to detect and respond to excess methane.--The
6 following actions are required to detect and respond to excess
7 methane:

8 (1) Location of tests. Tests for methane concentrations
9 under this section shall be made at least 12 inches from the
10 roof, face, ribs and floor.

11 (2) Working places and intake air courses.

12 (i) When 1% or more methane is present in a working
13 place or an intake air course, including an air course in
14 which a belt conveyor is located or in an area where
15 mechanized mining equipment is being installed or
16 removed:

17 (A) Except intrinsically safe atmospheric
18 monitoring systems (AMS), electrically powered
19 equipment in the affected area shall be deenergized
20 and other mechanized equipment shall be shut off.

21 (B) Changes or adjustments shall be made
22 immediately to the ventilation system to reduce the
23 concentration of methane to less than 1%.

24 (C) No other work shall be permitted in the
25 affected area until the methane concentration is less
26 than 1%.

27 (ii) When 1.5% or more methane is present in a
28 working place or an intake air course, including an air
29 course in which a belt conveyor is located or in an area
30 where mechanized mining equipment is being installed or

1 removed:

2 (A) Except for Federal or State mine inspectors,
3 the mine foreman or assistant mine foreman or
4 individuals authorized by the mine foreman or
5 assistant mine foreman, all individuals shall be
6 withdrawn from the affected area.

7 (B) Except for intrinsically safe AMS,
8 electrically powered equipment in the affected area
9 shall be disconnected at the power source.

10 (3) Return air split.

11 (i) When 1% or more methane is present in a return
12 air split between the last working place on a working
13 section and where that split of air meets another split
14 of air or the location at which the split is used to
15 ventilate seals or worked-out areas, changes or
16 adjustments shall be made immediately to the ventilation
17 system to reduce the concentration of methane in the
18 return air to less than 1%.

19 (ii) When 1.5% or more methane is present in a
20 return air split between the last working place on a
21 working section and where that split of air meets another
22 split of air or the location where the split is used to
23 ventilate seals or worked-out areas, except for Federal
24 or State mine inspectors, the mine foreman or assistant
25 mine foreman or individuals authorized by the mine
26 foreman or assistant mine foreman, all individuals shall
27 be withdrawn from the affected area.

28 (iii) Other than intrinsically safe AMS, equipment
29 in the affected area shall be deenergized, electric power
30 shall be disconnected at the power source and other

1 mechanized equipment shall be shut off.

2 (iv) No other work shall be permitted in the
3 affected area until the methane concentration in the
4 return air is less than 1%.

5 (4) Return air split alternative.

6 (i) The provisions of this paragraph may apply if:

7 (A) The quantity of air in the split ventilating
8 the active workings is at least 27,000 cubic feet per
9 minute in the last open crosscut or the quantity
10 specified in the approved ventilation plan, whichever
11 is greater.

12 (B) The methane content of the air in the split
13 is continuously monitored during mining operations by
14 an AMS that gives a visual and audible signal on the
15 working section when the methane in the return air
16 reaches 1.5% and the methane content is monitored as
17 specified in the approved ventilation plan.

18 (C) Rock dust is continuously applied with a
19 mechanical duster to the return air course during
20 coal production at a location in the air course
21 immediately outby the most inby monitoring point.

22 (ii) When 1.5% or more methane is present in a
23 return air split between a point in the return opposite
24 the section loading point and where that split of air
25 meets another split of air or where the split of air is
26 used to ventilate seals or worked-out areas:

27 (A) Changes or adjustments shall be made
28 immediately to the ventilation system to reduce the
29 concentration of methane in the return air less than
30 1.5%.

1 (B) Except for Federal or State mine inspectors,
2 the mine foreman or assistant mine foreman or
3 individuals authorized by the mine foreman or
4 assistant mine foreman, all individuals shall be
5 withdrawn from the affected area.

6 (C) Except for intrinsically safe AMS, equipment
7 in the affected area shall be deenergized, electric
8 power shall be disconnected at the power source and
9 other mechanized equipment shall be shut off.

10 (D) No other work shall be permitted in the
11 affected area until the methane concentration in the
12 return air is less than 1.5%.

13 (e) ~~Bleeders and other return air courses~~ CHANGES AND ←
14 ADJUSTMENTS IN VENTILATION.--

15 (1) If either the concentration of methane in a bleeder
16 split of air immediately before the air in the split joins
17 another split of air, or in a return air course other than as
18 described in subsection (d)(3) and (4), contains methane gas
19 in an amount of 2% or greater as detected by an approved gas
20 detection device, changes or adjustments shall be made
21 immediately in the ventilation in the mine so that returning
22 air contains less than 2% of methane gas.

23 (2) When 2% of methane is exceeded beyond the mixing
24 point with another split in the main return, the operator
25 shall submit a written plan to abate the problem to the
26 department for approval.

27 (f) Submittal of detailed ventilation plan to department.--

28 (1) A mine operator shall submit a detailed ventilation
29 plan and any addendums to the department for review and
30 comment. The mine operator shall review the plan with the

1 department and address concerns to the extent practicable.
2 The department shall submit any concern that is not addressed
3 to MSHA through comments to the plan. The mine operator shall
4 provide a copy of the plan to the department and the
5 representative of the miners, if applicable, ten days prior
6 to the submittal of the plan to MSHA.

7 (2) The operator shall give the department a copy of the
8 MSHA-approved plan and any addendums as soon as the operator
9 receives the approval.

10 (3) In the event of an unforeseen situation requiring
11 immediate action on a plan revision, the operator shall
12 submit the proposed revision to the department and the
13 representative of the miners when the proposed revision is
14 submitted to MSHA. The department shall work with the
15 operator to review and comment on the proposed plan revision
16 to MSHA as quickly as possible.

17 (4) Upon approval by MSHA, the plan is enforceable by
18 the department.

19 Section 231. Crosscuts and stoppings.

20 (a) Maximum distance.--

21 (1) The distance driven to establish ventilation
22 connections between entries or rooms shall not exceed 200
23 linear feet. Where adequate ventilation is provided, the
24 entry or room may be driven in conjunction with the new air
25 connection, provided that the distance to either face does
26 not exceed 200 linear feet when the new air connection is
27 established.

28 (2) In no case shall any place be driven a total of more
29 than 200 linear feet unless ventilation connections have been
30 established, except as provided under this act.

1 (3) Where adequate ventilation can be provided, the
2 department may give written permission to authorize a greater
3 distance.

4 (b) Closure of crosscuts.--Crosscuts between intakes and
5 return air courses shall be closed, except the one nearest the
6 face. Crosscuts between rooms shall be closed, where necessary
7 or when required by the department, to provide adequate
8 ventilation at the working face.

9 (c) Air connections.--Where practicable, an air connection
10 shall be provided at or near the face of each entry or room
11 before the place is abandoned.

12 (d) Excavations.--Excavations shall not exceed 18 feet in
13 depth, unless permission is obtained from the department to
14 drive a greater distance beyond the last open crosscut, if such
15 excavations are kept free of accumulations of methane by use of
16 line brattice or other adequate means.

17 (e) Construction materials of stoppings.--A permanent
18 stopping shall be built of solid, substantial, incombustible
19 material, including, but not limited to, concrete, concrete
20 blocks, bricks, steel or tile, provided that, where physical
21 conditions exist because of caving that makes the use of
22 concrete, concrete blocks, brick, steel or tile impracticable,
23 timber laid longitudinally skin-to-skin or an approved
24 substitute may be used. A temporary stopping may be erected in
25 cut-throughs near the working face. A stopping shall be
26 reasonably airtight.

27 (f) Building and maintenance.--A permanent stopping or other
28 permanent ventilation control device shall be built and
29 maintained as follows:

30 (1) Between intake and return air courses, except

1 temporary controls may be used in rooms that are 600 feet or
2 less from the centerline of the entry from which the room was
3 developed, including where continuous face haulage systems
4 are used in the rooms. Unless otherwise approved in the
5 ventilation plan, the stopping or control shall be maintained
6 to and including the third connecting crosscut outby the
7 working face.

8 (2) To separate belt conveyor haulageways from intake
9 air courses when the air in the intake air courses is used to
10 provide air to active working places, except temporary
11 ventilation controls may be used in rooms that are 600 feet
12 or less from the centerline of the entry from which the rooms
13 were developed, including where continuous face haulage
14 systems are used in the rooms. When continuous face haulage
15 systems are used, a permanent stopping or other device shall
16 be built and maintained to the outby most point of travel of
17 the dolly or 600 feet from the point of deepest penetration
18 in the conveyor belt entry, whichever distance is closer to
19 the point of deepest penetration, to separate the continuous
20 haulage entry from the intake entries.

21 Section 232. Overcasts and undercasts.

22 (a) Arrangement of ventilation.--Ventilation shall be so
23 arranged by means of air locks, overcasts or undercasts that the
24 passage of trips or individuals along the entries will not cause
25 interruptions of the air current. In face areas where it is
26 impracticable to install air locks, single doors may be used
27 with the permission of the department. An air lock shall be
28 ventilated sufficiently to prevent accumulations of methane in
29 it.

30 (b) Doors.--

1 (1) A door controlling ventilation shall be kept closed,
2 except when men or equipment are passing through the doorway.
3 Motor crews and other individuals who open a door shall see
4 that the door is closed before leaving it.

5 (2) It shall be unlawful for an individual to knowingly
6 leave a door or a check-curtain open.

7 (c) Hanging of doors.--A door controlling ventilation shall
8 be hung in such a manner as to be self-closing.

9 (d) Construction materials.--Overcasts and undercasts shall
10 be constructed tightly of incombustible material, such as
11 masonry, concrete, concrete blocks or fire-resistant
12 prefabricated material of sufficient strength to withstand
13 possible falls from the roof. Overcasts and undercasts shall be
14 of ample area to pass the required quantity of air and shall be
15 kept clear of obstructions.

16 Section 233. Line brattice.

17 (a) General rule.--Substantially constructed line brattice
18 shall be used from the last open crosscut of an entry or room
19 when necessary or required by the department to provide adequate
20 ventilation for the workmen and to remove gases and explosive
21 fumes. When damaged by falls or otherwise, line brattice shall
22 be repaired promptly.

23 (b) Spacing.--The space between the line brattice and the
24 rib shall be large enough to permit the flow of a sufficient
25 volume of air to keep the working face clear of flammable and
26 noxious gases.

27 (c) Construction material.--Brattice cloth used underground
28 shall be constructed of approved flame-resistant material.

29 Section 234. Auxiliary blowers and fans.

30 (a) Procedure.--

1 (1) The operator of a mine who desires to use in the
2 mine an auxiliary blower or exhaust fan shall submit to the
3 department a ventilation plan showing the proposed use of the
4 auxiliary blower or exhaust fan.

5 (2) The department shall review the plan and take one of
6 the following actions:

7 (i) Approve the plan.

8 (ii) Request additional information.

9 (iii) Disapprove the plan and set forth in writing
10 its reasons for the disapproval.

11 (3) In approving a plan, the department shall require
12 that an auxiliary blower or exhaust fan shall be:

13 (i) Powered by an approved motor when installed
14 underground.

15 (ii) Operated continuously while any work is being
16 performed in the area being ventilated by the blower or
17 fan.

18 (iii) Be so placed that recirculation of the air is
19 not possible.

20 (b) Time period for review.--The department shall approve or
21 disapprove a plan within 60 days after being initially submitted
22 by the operator.

23 Section 235. Unused and abandoned parts of mines.

24 An area that is not sealed shall be ventilated. Return air
25 may be used to ventilate the area. The department shall approve
26 a ventilation plan for an abandoned, unused or sealed part of a
27 mine.

28 Section 236. Sewage dumping prohibited.

29 If any individual shall construct or cause to be constructed
30 for use after the effective date of this section a sewer or

1 other method of drainage from a building or dwelling house for
2 the carrying of sewage, offal, refuse or other offensive matter
3 into any portion of an operating or abandoned mine, the
4 individual commits a misdemeanor of the third degree.

5 Section 237. Fans.

6 (a) General rule.--The ventilation of a mine that extends
7 more than 200 feet underground and is opened after the effective
8 date of this section shall be produced by a mechanically
9 operated fan or fans. The fan or fans shall be kept in
10 continuous operation unless written permission to do otherwise
11 is granted by the department.

12 (b) Location.--Except as otherwise provided under subsection

13 (c), a main fan shall be:

14 (1) Located on the surface in fireproof housing offset
15 not less than 15 feet from the nearest side of the mine
16 opening.

17 (2) Equipped with fireproof air ducts provided with
18 explosion doors or a weakwall.

19 (3) Operated from a separate power circuit.

20 (c) Exception.--In lieu of the requirements for the location
21 of fans and pressure-relief facilities, a fan may be directly in
22 front of or over a mine opening if:

23 (1) The opening is not in direct line with possible
24 forces coming out of the mine if an explosion occurs.

25 (2) There is another opening having a weakwall stopping
26 or explosion doors that would be in direct line with forces
27 coming out of the mine.

28 All main fans shall be provided with pressure-recording gauges
29 or water gauges.

30 (d) Recordkeeping and inspections.--

1 (1) A record of the charts shall be kept for one year.

2 (2) A daily inspection shall be made of all main fans
3 and connected machinery by a competent individual and a
4 record kept of the inspection in a book prescribed for that
5 purpose.

6 (e) Warning of fan interruption.--Approved facilities shall
7 be provided at a point or points under observation while men are
8 in the mine and shall give warning of an interruption to a fan.
9 Where such facilities are not provided, an attendant shall be
10 constantly kept on duty while individuals are working in the
11 mine.

12 Section 238. Measurement of methane.

13 The mine foreman or superintendent shall once each week
14 direct and see that the methane content of the ventilating
15 current or currents is determined by analyses or by an
16 instrument capable of accuracy to .1%. The samples or the
17 determinations shall be taken on the return end of the air
18 circuit or circuits just beyond the last working place, unless
19 otherwise directed by the department, and a correct report of
20 these determinations shall be promptly furnished to the
21 department. The determinations or samples shall be taken on days
22 when individuals are working and recorded in a book provided for
23 that purpose.

24 Section 239. Control of coal dust and rock dusting.

25 (a) Method of removal.--

26 (1) Dangerous accumulations of fine, dry coal dust shall
27 be removed from a mine or neutralized by the application of
28 rock dust, and all dry and dusty operating sections and
29 haulageways and the back entries for at least 1,000 feet
30 outby the first active working place in each operating

1 section shall be kept watered down, rock dusted or dust
2 allayed by such other methods as may be approved by the
3 department.

4 (2) A mine or location in a mine that is too wet or too
5 high in incombustible content to initiate or propagate a coal
6 dust ignition need not be rock dusted during the time any of
7 those conditions prevail.

8 (3) Coal dust and other dust in suspension in unusual
9 quantities shall be allayed by sprinkling or other dust
10 allaying or collecting devices.

11 (b) Specifications.--

12 (1) In a dry and dusty mine or section thereof, rock
13 dust shall be applied and maintained upon the roof, floor and
14 sides of all operating sections, haulageways and parallel
15 entries connected thereto by open crosscuts. Back entries
16 shall be rock dusted for at least 1,000 feet out by the
17 junction with the first active working place.

18 (2) Rock dust shall be so applied to include the last
19 open crosscut of rooms and entries and to within 40 feet of
20 the faces. In mines where mining is done by continuous-type
21 mining machinery, the distances from the face to which rock
22 dust shall be applied shall be the mining distance for one
23 shift if:

24 (i) The active working place shall be kept from damp
25 to wet.

26 (ii) After coal production on any shifts has ceased,
27 an application of rock dust shall be made in the exposed
28 area to within 40 feet of the face before additional
29 mining is performed in the area.

30 (3) Rock dust shall be maintained in such quantity that

1 the incombustible content of the mine dust shall not be less
2 than 65%.

3 (c) Composition of rock dust.--Rock dust shall not contain
4 more than 5% by volume of quartz or free silica particles and
5 shall be pulverized so that 100% will pass through a 20-mesh
6 screen and 70% or more will pass through a 200-mesh screen.
7 Section 240. Instruction of employees and examination of
8 working areas.

9 (a) General rule.--The mine foreman or assistant mine
10 foreman shall ascertain that all workmen are trained in the
11 proper methods of testing roof, face and ribs. The mine foreman
12 shall designate the tool or tools to be used for testing.
13 Employees whose work exposes them to hazards or falls of roof
14 and coal shall thoroughly test the roof, face and ribs before
15 starting to work or before starting a machine, and frequently
16 thereafter.

17 (b) Examination for date marks.--A miner shall examine his
18 place to determine whether the mine examiner has left the date
19 marks indicating his examination thereof. If date marks cannot
20 be found, the miner shall notify the mine foreman or assistant
21 mine foreman of that fact.

22 (c) Correction of unsafe roof, face or rib conditions.--

23 (1) If roof, face or rib conditions are found to be
24 unsafe, they shall be corrected by taking down loose material
25 or shall be securely supported before work is started.

26 (2) If roof, face or rib conditions are found to be
27 unsafe and normal taking down or supporting practices cannot
28 correct the unsafe condition, the place shall be vacated and
29 guarded or a danger sign erected to prevent unauthorized
30 entrance and the certified mine official in charge promptly

1 shall be notified. Only individuals capable of correcting the
2 dangerous condition may be delegated to do such work.

3 (3) The certified mine official in charge shall examine
4 for unsafe conditions and the roof, faces, ribs and timbers
5 or supports of all working places each time they visit a
6 place. Unsafe conditions found shall be corrected promptly.
7 All employees shall notify the mine foreman or assistant mine
8 foreman of an unsafe condition in the mine when the condition
9 is known to them.

10 Section 241. Roof support.

11 (a) General rule.--The roof in an underground area shall be
12 supported as necessary for the protection of the employees and
13 equipment. A roof control plan suitable to the roof conditions
14 of each mine or part of a mine shall be adopted and complied
15 with by the operator. The department shall be notified of the
16 adoption of the plan of roof support, shall review the plan and:

17 (1) approve it;

18 (2) request additional information; or

19 (3) disapprove the plan and state in writing its reason
20 for the disapproval.

21 (b) Roof support plans to be posted.--Workmen whose work
22 involves roof support shall be informed of approved roof support
23 plans and the plans shall be posted. Additional roof supports
24 shall be used when and where necessary.

25 (c) Periodic revision and update of roof control plan.--
26 Every mine operator shall revise and update the roof control
27 plan every six months or more frequently if required to do so by
28 the department. A copy of the plan shall be provided to the
29 representative of the miners ten days prior to submitting it to
30 the department for review and comment.

1 Section 242. Authorized explosives.

2 Permissible explosives, approved breaking devices or approved
3 blasting devices shall be used in underground mines.

4 Section 243. (Reserved).

5 Section 244. Underground storage of explosives.

6 (a) Placement.--Explosives and detonators stored underground
7 shall be:

8 (1) Kept in section boxes or magazines of substantial
9 construction with no metal exposed on the inside.

10 (2) Located at least 25 feet from roadways and power
11 wires in a well-rock-dusted location protected from falls of
12 roof.

13 (b) Separation.--If not kept in separate boxes or magazines
14 not less than five feet apart, the explosives and detonators may
15 be kept in the same box or magazine if separated by at least a
16 four-inch hardwood partition or the equivalent. The boxes or
17 magazines shall be kept at least 300 feet from the faces and out
18 of the direct line of blasting and shall be installed outby the
19 last permanent stopping and on intake air.

20 Section 245. Preparation of shots, blasting practices and
21 multiple shooting.

22 (a) Requirements.--

23 (1) Only certified shot-firers shall be permitted to
24 handle explosives and conduct blasting.

25 (2) Only electric detonators of proper strength fired
26 with approved shot-firing units shall be used, and drillholes
27 shall be solidly stemmed with at least 24 inches of
28 incombustible material or at least one-half of the length of
29 the hole shall be solidly stemmed if the hole is less than
30 four feet in depth unless other approved stemming devices or

1 methods are used.

2 (3) Drillholes shall be of ample size and shall not be
3 drilled beyond the limits of the cut, and, as far as
4 practicable, cuttings and dust shall be cleaned from the
5 holes before the charge is inserted. Charges of explosives
6 exceeding one and one-half pounds shall be used only if
7 drillholes are six feet or more in depth.

8 (4) Ample warning shall be given before shots are fired,
9 and care shall be taken to determine that all individuals are
10 in the clear before firing. Individuals shall be removed from
11 adjoining areas and other areas when there is danger of shots
12 blowing through.

13 (5) No shots shall be fired:

14 (i) In any area until the area has been properly
15 examined by the shot-firer.

16 (ii) In any area where 1% of gas is detected by an
17 approved gas detection device.

18 (6) After firing any shot, the shot-firer shall make a
19 careful examination of the work area before leaving the area
20 or before performing any other work in the area.

21 (b) Plan to be submitted to department.--An operator of a
22 mine who desires to conduct multiple shooting shall submit to
23 the department for approval a plan indicating the manner and
24 details proposed to engage in multiple shooting.

25 (c) Prohibitions.--

26 (1) While boreholes are being charged, electrical
27 equipment shall not be operated in the work area, and only
28 work in connection with roof support and general safety shall
29 be performed. Shots shall be fired promptly after charging.

30 (2) Mudcaps, adobes or any other unconfined shots shall

1 not be permitted in any bituminous coal mine.

2 (3) No solid shooting shall be permitted without
3 approval from the department. Where solid shooting is
4 practiced, blasting holes shall be stemmed the full length of
5 the hole.

6 (d) Blasting and shooting cables.--

7 (1) Blasting cables shall be well-insulated and shall be
8 at least 125 feet in length to permit individuals authorized
9 to fire shots to get in a safe place out of the line of
10 blasting.

11 (2) Shooting cables shall be kept away from power wires
12 and all other sources of electric current, connected to the
13 leg wires by the individual who fires the shot, staggered as
14 to length or well-separated at the detonator leg wires and
15 shunted at the battery end until ready to connect to the
16 blasting unit.

17 (3) Detonator leg wires shall be kept shunted until
18 ready to connect to the blasting cable.

19 Section 246. Transportation of explosives.

20 (a) Construction of containers.--

21 (1) Individual containers used to carry permissible
22 explosives or detonators shall be constructed of substantial,
23 nonconductive materials approved by the department, kept
24 closed and maintained in good condition. When explosives or
25 detonators are transported underground in cars moved by means
26 of powered haulage equipment, they shall be in cars having a
27 substantial covering or in special substantially built
28 covered containers used specifically for transporting
29 detonators or explosives.

30 (2) Explosives or detonators shall not be hauled into or

1 out of the mine within five minutes preceding or following
2 individuals being transported.

3 (b) Prohibitions.--

4 (1) Neither explosives nor detonators shall be
5 transported on flight or shaking conveyors, mechanical
6 loading machines, locomotives, scrapers, cutting machines,
7 drill trucks or any self-propelled mobile equipment.

8 (2) No shot-firer shall carry into or have delivered to
9 him any larger quantity of explosives or detonators than the
10 shot-firer may reasonably expect to use in any one shift.

11 (c) Separation of explosives and detonators.--If explosives
12 and detonators are transported in the same explosives car or in
13 the same special container, they shall be separated by at least
14 four inches of hardwood partition or the equivalent. The bodies
15 of the cars or containers shall be constructed or lined with
16 nonconductive material.

17 Section 247. Electrical shot-firing.

18 Electricity from any grounded circuit shall not be used for
19 firing shots.

20 Section 248. General shot-firing rules.

21 (a) Ignited gas.--When gas is ignited by a blast or a fire
22 occurs, the shot-firer shall immediately extinguish it, if
23 possible, and if unable to do so shall immediately notify the
24 mine foreman of the fact and warn other individuals in the
25 vicinity who might be endangered.

26 (b) Shot-firer to provide notice to others.--When a shot-
27 firer is about to fire a blast, he shall notify all individuals
28 who may be endangered and shall give sufficient alarm so that
29 any individual approaching may be warned of the danger.

30 (c) Construction of charging and tamping tools.--All

1 charging and tamping tools shall be constructed of nonsparking
2 materials.

3 (d) Disconnection from electricity.--Immediately after the
4 firing of a shot, the firing leads shall be disconnected from
5 the supply or source of electricity and shunted.

6 (e) Preconditions to firing machine or battery.--No firing
7 machine or battery shall be connected to the shot-firing leads
8 unless:

9 (1) All other steps preparatory to the firing of a shot
10 have been completed.

11 (2) All individuals have been moved to a place of
12 safety.

13 (3) No individual other than the shot-firer has made the
14 connection.

15 (f) Firing machine or battery in possession of shot-firer.--
16 The shot-firer shall keep the firing machine or battery in his
17 possession at all times while blasting.

18 (g) Testing of blasting devices.--Frequent tests shall be
19 made of all blasting devices to see that their capacity has not
20 been decreased by use or accident.

21 (h) Examinations for gas.--The shot-firer shall examine the
22 place for gas and other dangers before and after firing each
23 shot or blast.

24 Section 249. Hoisting equipment and operations.

25 (a) General duties of operator or superintendent.--

26 (1) The operator or superintendent of a bituminous coal
27 mine worked by shaft shall provide and maintain:

28 (i) A telephone or other means of communication from
29 the top to the bottom and intermediate landings of the
30 shaft.

1 (ii) A standard means of signaling.

2 (iii) An effective safety catch, bridle chains,
3 automatic stopping device and automatic overwind.

4 (iv) A sufficient cover on every cage used for
5 lowering or hoisting individuals.

6 (v) An effective safety gate at the top of the cage
7 shaft and intermediate landings controlled by the cage.

8 (vi) An adequate brake on the drum of every machine
9 used to lower or hoist individuals in the shaft.

10 (2) The operator shall have the machinery used for
11 lowering and hoisting individuals into or out of the mine
12 kept in safe condition and equipped with a reliable
13 indicator. Cages and elevators shall be inspected once in
14 each 24 hours by a competent individual of the company or by
15 a manufacturer's representative and a safety catch test made
16 every two months, a record kept thereof and a copy sent to
17 the department.

18 (3) (i) Where a hoisting engineer is required, he shall
19 be readily available at all times when individuals are in
20 the mine. The hoisting engineer shall operate the empty
21 cage up and down the shaft at least one round trip at the
22 beginning of each shift, after material has been lowered
23 or hoisted and after the hoist has been idle for one hour
24 or more before hoisting or lowering individuals.

25 (ii) Subparagraph (i) shall not apply to elevators
26 used exclusively for hoisting and lowering individuals.

27 (4) There shall be cut out around the side of the
28 hoisting shaft, or driven through the solid strata at the
29 bottom thereof, a travelingway not less than five feet high
30 and three feet wide to enable an individual to pass the shaft

1 in going from one side to the other without passing over or
2 under the cage or other hoisting apparatus.

3 (5) Positive stop blocks or derails shall be placed near
4 the top and bottom, at all intermediate landings of slopes
5 and surface inclines and at approaches to all shaft landings.

6 (6) A waiting station with sufficient room, ample
7 clearance from moving equipment and adequate seating
8 facilities shall be provided where individuals are required
9 to wait for man-trips or cages. The individuals shall remain
10 in the station until the man-trip or cage is available.

11 (7) No hoisting engineer shall be required for
12 automatically operated cages or elevators.

13 (b) Duties of mine foreman.--

14 (1) When hoisting or lowering of individuals occurs
15 during darkness, at any mine operated by shaft, the mine
16 foreman shall provide and maintain, at the shaft mouth, a
17 light of stationary character sufficient to show the landing
18 and all surrounding objects distinctly and sufficient light
19 of a stationary character shall be located at the bottom of
20 the shaft so that individuals going to the bottom may clearly
21 discern the cages, elevators and other objects contiguous
22 thereto.

23 (2) The mine foreman shall see that:

24 (i) No cages or elevators on which individuals ride
25 are lifted or lowered at a rate of speed greater than 900
26 feet per minute.

27 (ii) No mine cars, either empty or loaded, are
28 hoisted or lowered on cages while individuals are being
29 lowered or hoisted.

30 (iii) No cage having an unstable self-dump platform

1 shall be used for carrying individuals unless the cage is
2 provided with some device by which it may be securely
3 locked when individuals are being hoisted or lowered into
4 the mine.

5 (c) Ropes, links and chains.--

6 (1) In shafts where coal is hoisted and individuals
7 lowered into or hoisted from the mine, the ropes, links and
8 chains shall be of ample strength, with a factor of safety of
9 not less than five to one of the maximum load.

10 (2) In shafts used exclusively for lowering or hoisting
11 individuals and material, the factor of safety of ropes,
12 links and chains shall not be less than ten to one of the
13 maximum load.

14 (3) All ropes, links and chains shall be carefully
15 examined at least once every 24 hours by a competent
16 individual delegated for that purpose by the superintendent.

17 (4) Any defect found from the examination, by which life
18 and limb may be endangered, shall be reported at once in
19 writing to the superintendent, who shall immediately proceed
20 to remedy the defect. Until that is accomplished, the
21 superintendent shall prohibit any individual from being
22 lowered into or hoisted from the mine by the defective
23 apparatus.

24 (5) The individual making the examination shall keep a
25 daily record of each inspection, in ink, in a book kept at
26 the mine office for that purpose.

27 (d) Cage requirements.--

28 (1) (i) The operator or superintendent shall provide
29 every cage used for lowering or hoisting individuals with
30 handrails at sides or overhead or additional suitable

1 devices and with a bar or gate at ends.

2 (ii) Subparagraph (i) shall not apply to elevators
3 used exclusively for lowering and hoisting individuals.

4 (2) The ropes shall be securely attached to the sides of
5 the drum of every machine that is used for lowering and
6 hoisting individuals or material into and out of the mine,
7 and the flanges shall have a clearance of not less than four
8 inches when the whole of the rope is wound on the drum.

9 (e) Signaling system.--

10 (1) In all shafts and slopes where individuals, coal and
11 other materials are hoisted by machinery, a system of
12 signaling approved by the department shall be in effect. The
13 following code of signals shall be used:

14 (i) One signal to hoist the car or cage.

15 (ii) One signal to stop the car or cage when in
16 motion.

17 (iii) Two signals to lower the car or cage.

18 (iv) Three signals to hoist individuals.

19 (2) The hoist operator shall signal back when ready,
20 after which the individual shall get on the car or cage and
21 then one signal shall be given to hoist.

22 Section 250. Bottom person.

23 (a) Duties.--At every shaft or slope where individuals are
24 lowered into or hoisted from the mine, a bottom person, who
25 shall be over 21 years of age, shall be designated by the mine
26 foreman. The bottom person shall:

27 (1) Be on duty when individuals are being hoisted or
28 lowered at the beginning and end of each shift.

29 (2) Personally attend to the signals and see that the
30 provisions of this act in respect to hoisting individuals in

1 shafts or slopes are complied with.

2 (3) Not allow any tools to be placed on the same cage
3 with individuals or on either cage when they are being
4 hoisted out of the mine, except for the purpose of repairing
5 the shaft or machinery in the shaft. Individuals shall place
6 their tools in containers or cars provided for that purpose,
7 which containers or cars shall be hoisted before or after the
8 individuals have been hoisted.

9 (4) Immediately inform the mine foreman of any
10 violation.

11 (5) Not attempt to withdraw the car until the cage comes
12 to a rest.

13 (6) When putting the full car on the cage, see that the
14 springs or catches are properly adjusted so as to keep the
15 car in its proper place, before giving the signal to the
16 hoist operator.

17 (b) When bottom person not required.--No bottom person shall
18 be required for automatically operated cages or elevators.

19 Section 251. Number of individuals to be hoisted.

20 (a) General rule.--No greater number of individuals shall be
21 lowered or hoisted at any one time in any shaft or slope than is
22 permitted by the department. Whenever the number of individuals
23 returning from work shall arrive at the bottom of the shaft or
24 slope in which individuals are regularly hoisted or lowered,
25 they shall be promptly furnished with an empty cage, car or
26 elevator and be hoisted to the surface. In cases of emergency, a
27 lesser number than permitted shall be promptly hoisted.

28 (b) Posting of notice.--A notice of the number permitted to
29 be lowered or hoisted at any one time shall be posted by the
30 operator or superintendent in conspicuous places at the top and

1 bottom of the shaft, and the cage or cages or other safe means
2 of egress shall be available at all times for the individuals
3 employed in any mine that has no second outlet available.

4 Section 252. Top person.

5 (a) Duties.--At every shaft or slope where individuals are
6 lowered into or hoisted from a mine, a top person or trip rider,
7 who shall be over 21 years of age, shall be designated by the
8 superintendent. The top person shall:

9 (1) Be on duty when individuals are being hoisted or
10 lowered at the beginning and end of each shift.

11 (2) Personally attend to the signals and see that the
12 provisions of this act in respect to lowering and hoisting
13 individuals in shafts or slopes are complied with. The trip
14 rider may also perform this duty.

15 (3) Not allow any tools to be placed on the same cage
16 with persons or on either cage when persons are being lowered
17 into the mine, except for the purpose of repairing the shaft
18 or the machinery in the shaft. Individuals shall place their
19 tools in containers or cars provided for that purpose, which
20 containers or cars shall be lowered before or after the
21 individuals have been lowered.

22 (4) If located on a slope or incline plane, close the
23 safety block or other device as soon as the cars have reached
24 the landing in order to prevent any loose or runaway cars
25 from descending the slope or incline plane, and in no case
26 shall the safety block or other device be withdrawn until the
27 cars are coupled to the rope or chain and the proper signal
28 given.

29 (5) Carefully inspect each day all the machinery in and
30 about the headframe and the rope used, promptly report to the

1 superintendent any defect discovered and securely attach the
2 cars to the rope before lowering them down the incline.

3 (6) Ring the alarm bell in case of an accident and, when
4 necessary, immediately set free the drop logs or safety
5 switch to act.

6 (7) If located in a shaft, see that the springs or keeps
7 for the cage rest upon and are kept in good working order.

8 (8) When taking off the full car, see that no coal or
9 other material falls down the shaft.

10 (b) When top person not required--No top person shall be
11 required for automatically operated cages or elevators.

12 (c) Reporting of individuals crowding or pushing.--Any
13 individual crowding or pushing to get on or off a cage, elevator
14 or car, thereby endangering life, shall be reported by any
15 individual to the superintendent, who in turn shall report the
16 incident to the department for appropriate action.

17 Section 253. Use of competent hoist operators.

18 (a) Prohibitions.--

19 (1) No operator or superintendent of any bituminous coal
20 mine worked by shaft, slope or incline shall place in charge
21 of any hoist used for lowering or hoisting individuals in the
22 mine hoisting operators who are under 21 years of age.

23 (2) No hoist operator in charge of such machinery shall
24 allow any individual, except as may be designated for this
25 purpose by the operator or superintendent, to interfere with
26 any part of the machinery.

27 (3) No individual shall interfere with or intimidate the
28 hoist operator in the discharge of the duties of the hoist
29 operators.

30 (4) No individual shall ride on a loaded cage or car in

1 any shaft, slope or incline. This paragraph shall not be
2 construed to prevent a trip rider from riding during the
3 performance of his authorized duties.

4 (b) Special precautions.--When individuals are being lowered
5 or raised, the hoist operator shall take special precautions to
6 keep the hoist well under control.

7 Section 254. Clearances and shelter holes.

8 (a) Specifications for clearances.--

9 (1) Track switches, except room and entry development
10 switches, shall be provided with properly installed throws,
11 bridle bars and guard rails.

12 (2) Switch throws and stands, where possible, shall be
13 placed on the clearance side.

14 (3) Haulage roads shall have a continuous unobstructed
15 clearance of at least 30 inches from the widest extension of
16 regular coal transportation equipment on the clearance side.
17 On haulage roads where trolley lines are used, the clearance
18 shall be on the side opposite the trolley lines. The
19 clearance space on all haulage roads shall be kept free of
20 loose rock, coal, supplies or other materials, provided that
21 not more than 30 inches need be kept free of such
22 obstructions.

23 (4) Ample clearance shall be provided at all points
24 where supplies are loaded or unloaded along haulage roads or
25 conveyors.

26 (b) Specifications for shelter holes.--

27 (1) (i) Shelter holes shall be provided on the
28 clearance side along designated travelways, which are
29 also used as haulage entries, other than belt conveyor
30 haulage entries.

1 (ii) Subparagraph (i) shall not apply to face area
2 or room haulageways.

3 (2) Shelter holes shall be spaced not more than 105 feet
4 apart unless otherwise approved by the department. Shelter
5 holes shall be at least five feet in depth, not more than
6 four feet in width, level with the roadway and at least four
7 feet in height.

8 (3) Crosscuts may be used as shelter holes even though
9 their width exceeds four feet and they shall be kept clear
10 for a depth of at least six feet.

11 (4) Shelter holes shall be kept clear of refuse and
12 other obstructions.

13 (5) Shelter holes shall be provided at switch throws and
14 at manually operated permanent doors.

15 Section 255. Underground haulage equipment.

16 (a) Maintenance.--Underground haulage equipment shall be
17 maintained in a safe operating condition. An audible warning
18 device and headlights shall be provided on each locomotive and
19 each shuttle car. Rerailing devices shall be provided on all
20 locomotives.

21 (b) Warnings to be sounded.--Operators of haulage equipment
22 shall sound a warning on approaching curves, intersections,
23 doors, curtains, manway crossings or any other location where
24 individuals are likely to travel.

25 Section 256. Operation of haulage equipment.

26 (a) Duties of motormen and trip riders.--Motormen and trip
27 riders shall:

28 (1) Use care in handling locomotives and cars.

29 (2) See that the entire trip is coupled before starting.

30 (3) See that there is a conspicuous light or other

1 device approved by the department, properly maintained, on
2 the front and rear of each trip or train of cars when in
3 motion.

4 (b) Prohibitions.--

5 (1) No individual shall ride on locomotives unless
6 granted permission by the mine foreman.

7 (2) No individual shall ride on any loaded car or on the
8 outside of any car.

9 (3) No motorman or trip rider shall get on or off a
10 locomotive while it is in motion.

11 (4) No individual shall fly or run switches or ride on
12 the front bumper of a car. Back poling shall be permitted
13 only to the nearest turning point or when going up extremely
14 steep grades and then only cautiously and at slow speed. The
15 operator of a shuttle car shall face in the direction of
16 travel except during the loading operation when he may face
17 the loading machine.

18 (c) Duties of motormen.--Motormen shall:

19 (1) See that properly maintained safety devices are
20 placed on the last car of any trip being hauled upgrade, as
21 designated by the mine foreman and approved by the
22 department, on the front and rear of each trip or train of
23 cars when in motion.

24 (2) Inspect locomotives and report any mechanical
25 defects found to the proper mine official prior to operation.
26 The locomotive may not be operated until the defects are
27 corrected.

28 (3) If there is reason to leave a trip, see that the
29 trip is left in a safe place, secure from cars, locomotives
30 or other dangers and where it will not endanger the operators

1 of other trips or other individuals.

2 (d) System of signals, methods or devices.--A system of
3 signals, methods or devices shall be used to provide protection
4 for trips, locomotives and other equipment coming out onto
5 tracks used by other equipment. Where a dispatcher is employed
6 to control trips, traffic shall move only at his direction.

7 Section 257. Trip rider and bottom individual on rope haulage.

8 (a) Duties of trip rider.--The trip rider shall see that all
9 hitchings are safe for use and that the trip is coupled before
10 starting. If at any time the trip rider sees any material defect
11 in the rope, link or chain, he shall immediately remedy the
12 defect or, if he is unable to do so, shall detain the trip and
13 report the matter to the mine foreman or the assistant.

14 (b) Duties of bottom individual.--The bottom individual at
15 the bottom of any slope shall see that cars are properly coupled
16 to a rope or chain and that the safety catch or other device is
17 properly attached to the rear car before giving the signal to
18 the hoisting operator. The bottom individual shall not allow any
19 individual to ride up the slope other than the trip rider.

20 Section 258. Transportation of individuals.

21 (a) General rule.--The speed of mantrips shall be governed
22 by the mine foreman, and mantrips shall be operated at safe
23 speeds consistent with the condition of roads and type of
24 equipment used. ~~Mantrips or other adequate transportation, to be~~ ←
25 ~~used exclusively for the movement of workers in and out of the~~
26 ~~mine, shall be maintained at all times within 500 feet of the~~
27 ~~working faces in active sections. Where track mounted mantrips~~
28 ~~are utilized the track shall be maintained within 500 feet of~~
29 ~~the working face, except when any section is fully developed and~~
30 ~~being prepared for retreating, the distance of the mantrip may~~

1 ~~be extended to 800 feet if a vehicle with rubber tires is~~
2 ~~readily available in the working section. Each mantrip shall be~~
3 ~~provided with an audible warning device, a sealed beam~~
4 ~~headlight, or its equivalent, on each end, and reflectors on~~
5 ~~both ends and sides. The distance from the nearest face to the~~
6 ~~mantrip shall not exceed 1,000 feet. Each mantrip shall be under~~
7 the charge of a competent individual designated by the mine
8 foreman or the assistant mine foreman and operated independently
9 of any loaded trip of coal or other heavy material, but may
10 transport tools, small machine parts and supplies.

11 (A.1) RAIL AS EXCLUSIVE MEANS OF TRANSPORT.--WHERE ←
12 TRANSPORTATION OF PERSONNEL IS EXCLUSIVELY BY RAIL, TRACK SHALL
13 BE MAINTAINED TO WITHIN 750 FEET OF THE TAILPIECE ON THE
14 LONGWALL SECTION OR THE NEAREST WORKING FACE ON DEVELOPMENT
15 SECTIONS. THE DISTANCE CAN BE EXTENDED TO A DISTANCE OF UP TO
16 1,500 FEET IF A SELF-PROPELLED TRANSPORT VEHICLE WITH RUBBER
17 TIRES IS READILY AVAILABLE IN THE WORKING SECTION FOR
18 TRANSPORTATION OF SICK OR INJURED MINERS.

19 (A.2) VARIANCE.--THE OPERATOR MAY REQUEST IN WRITING FROM
20 THE DEPARTMENT A VARIANCE TO PERMIT TRACK DISTANCES IN EXCESS OF
21 1,500 FEET. A VARIANCE NOT DISAPPROVED WITHIN 30 DAYS AFTER
22 RECEIPT BY THE DEPARTMENT IS DEEMED APPROVED. IF A VARIANCE IS
23 GRANTED, A SELF-PROPELLED TRANSPORT VEHICLE WITH RUBBER TIRES
24 SHALL BE READILY AVAILABLE IN THE WORKING SECTION FOR
25 TRANSPORTATION OF SICK OR INJURED MINERS.

26 (b) Prohibition.--No individual shall:

27 (1) Ride under the trolley wire unless suitable covered
28 mantrips are used.

29 (2) Load or unload before the cars in which they are to
30 ride or are riding come to a full stop. Individuals shall

1 proceed in an orderly manner to and from mantrips.

2 (c) Adequate clearance and proper illumination.--Adequate
3 clearance and proper illumination shall be provided where
4 individuals load or unload mantrips.

5 (d) Adequate precautions.--Adequate precautions shall be
6 taken so that moving trips and standing cars are subject to
7 proper control by derailing or braking devices.

8 Section 259. Conveyor belts and conveyor equipment.

9 (a) Specifications.--

10 (1) Except as otherwise provided under paragraph (2),
11 all conveyor entries shall be provided with a minimum width
12 and height of not less than four feet for travel and, in
13 conveyor entries in which track is installed, the minimum
14 amount of clearance width shall not be less than two and one-
15 half feet, which clearance width shall be continuous
16 throughout the entry.

17 (2) In lieu of maintaining four feet of height in
18 conveyor entries, a minimum height of three feet and a
19 minimum width of four feet may be maintained, provided the
20 operator furnishes a mode of conveyance for men and material
21 other than on the conveyor. All such travel space and
22 clearance space shall be kept free of all forms of
23 obstruction underfoot and from electric wires and electric
24 cables. A space of not less than four feet in width shall be
25 provided for travel from the immediate entrance of each
26 working place to the face thereof, which space shall be kept
27 free of all forms of obstruction underfoot and free from
28 electric wires and electric cables.

29 (b) Cross points.--At all points where individuals must of
30 necessity cross conveyors, the conveyor at the point where the

1 crossing is made shall be so arranged that individuals can cross
2 safely and conveniently without coming into contact with the
3 conveyor.

4 (c) Automatic stop control.--Conveyors shall be equipped
5 with an automatic control that will stop the driving motor in
6 case of slipping on the drive pulley, and the control shall be
7 tested each operating shift to ascertain that it is in good
8 operating condition.

9 (d) Electric wires and cables.--All electric wires or
10 electric cables in completed portions of conveyor entries shall
11 be carried on insulators.

12 (e) Control lines.--Control lines shall be installed the
13 full length of the belt.

14 (f) Point type heat sensors.--Point type heat sensors shall
15 not be used as the primary type of fire sensors in any mine
16 opened more than six months after the effective date of this
17 section.

18 Section 260. Blowtorches and fuel.

19 No blowtorch may be used in a mine.

20 Section 261. Oxygen and gas containers.

21 (a) General rule.--A substantial insulated container
22 provided with a cover and specially designed for safe
23 transportation of the cylinders shall be used in transporting
24 oxygen and gas tanks or cylinders in all bituminous coal mines.

25 (b) Identification.--All oxygen and gas tanks or cylinders
26 shall be clearly identified.

27 Section 262. Transportation of oxygen and gas.

28 (a) General rule.--Transportation of oxygen and gas tanks or
29 cylinders shall be permitted on self-propelled machinery or belt
30 conveyors specially equipped for safe holding of the containers

1 in transportation. In no instance shall such transportation be
2 permitted in conjunction with any mantrip.

3 (b) Marking of empty tanks and cylinders.--Empty oxygen and
4 gas tanks or cylinders shall be marked "empty" and shall be
5 removed from the mine promptly in proper containers. The valve
6 protection caps shall be placed on all tanks or cylinders for
7 which caps are provided when not in use and when being
8 transported. No oxygen and gas tanks or cylinders shall be
9 transported with the hoses and gauges attached.

10 (c) Identification of tanks and cylinders.--All oxygen and
11 gas tanks or cylinders shall be clearly identified.

12 Section 263. Storage of oxygen and gas.

13 (a) General rule.--All oxygen and gas tanks or cylinders
14 shall be properly secured and protected against possible damage
15 when stored in and about bituminous coal mines. When oxygen and
16 gas tanks or cylinders are stored in underground shops or
17 surface structures, they shall be protected from damage by
18 falling material and secured in an upright position. Not more
19 than a one-week supply of oxygen or gas shall be stored in any
20 underground or surface shop. This quantity shall be determined
21 in agreement with the department.

22 (b) Valves and hoses.--The valves on oxygen and gas tanks or
23 cylinders shall be closed. The hoses shall be removed when not
24 in actual use, except in a properly ventilated and protected
25 underground machine shop or surface structure. Valves on empty
26 tanks or cylinders shall be kept closed.

27 Section 264. Use of oxygen and gas.

28 (a) General rule.--Oxygen and gas tanks or cylinders and
29 their contents must be used solely for their intended purposes.

30 (b) Training and clothing.--An individual assigned to use

1 and work with oxygen or gas shall be properly trained and
2 skilled in its use and shall be fully conversant with the danger
3 of its misuse. Any individual using oxygen or gas in and about a
4 bituminous coal mine shall be provided with goggles or shields,
5 and the clothing of such individual shall be reasonably free of
6 oil and grease.

7 (c) Lighting of torches.--Only a safe type of spark-lighter
8 shall be used for lighting torches. The use of matches,
9 cigarette lighters, electric arcs or hot metal to light or
10 relight a torch is prohibited.

11 (d) Maintenance.--The oxygen or gas hose lines, gauges and
12 similar equipment shall be maintained in safe operating
13 condition. Defective tanks, cylinders, gauges, hose lines,
14 torches and similar equipment shall be taken out of service upon
15 discovery and shall not be put into use until corrected and made
16 safe.

17 (e) Multiple units permitted.--

18 (1) Multiple units consisting of one gas tank and one
19 oxygen tank are permitted in a working section when
20 necessary. When not in use, the tanks shall be removed to a
21 point outby the last open crosscut and kept away from power
22 wires and electric equipment. A proper storage area must be
23 provided.

24 (2) This subsection does not apply to oxygen tanks used
25 to provide breathable air in the event of an emergency.

26 (f) Pressure.--Neither oxygen nor gas shall be used under
27 direct pressure from tanks or cylinders but must be used under
28 reduced pressure not exceeding pressures recommended by the
29 manufacturer of the oxygen or gas.

30 (g) Working sections.--Oxygen or gas cutting, burning or

1 welding shall be done in fresh intake air only in working
2 sections. The area where the work is to be done shall be
3 examined by a mine official before, during and after the welding
4 or burning to assure that no fire or other danger exists. In the
5 event the equipment to be repaired cannot be removed from the
6 face area to outby the last open crosscut, the following shall
7 be satisfied:

8 (1) Fresh intake air shall be established to a point
9 inby where the cutting or welding is to be performed.

10 (2) An approved gas detection device shall be used by a
11 mine official for gas detection during the cutting and
12 welding operation.

13 (3) No individual shall be permitted inby the point in
14 the working section where cutting or welding operations are
15 being performed.

16 (h) Safety requirements.--

17 (1) When oxygen or gas cutting, burning or welding is
18 being done, a suitable fire extinguisher shall be kept on
19 hand and ready for use. In dry or dusty locations, a water
20 line and tap under pressure or an adequate supply of rock
21 dust shall be available in the area where such work is
22 performed.

23 (2) Neither oxygen nor gas shall be used near oil,
24 grease or fine coal dust unless the oil, grease or fine coal
25 dust is adequately cleaned or made inert by the use of rock
26 dust or the area where the work is to be done is thoroughly
27 wetted.

28 (i) Intake air activity.--Oxygen or gas cutting, burning or
29 welding shall be done in intake air only. Underground shops
30 where oxygen gas burning occurs shall be on a separate split of

1 air.

2 (j) Tests for leaks.--Tests for leaks on hose valves or
3 gauges shall be made only with a soft brush and soapy water or
4 soapsuds.

5 (k) Torch-tip cleaners.--An efficient and proper type torch-
6 tip cleaner shall be kept on hand and used to maintain each
7 torch in safe operating condition. A suitable wrench designed
8 for oxygen and gas tanks shall be in the possession of the
9 individual authorized to use the equipment.

10 (l) Manifolding cylinders.--The practice known as
11 "manifolding cylinders" shall be permitted if the installation
12 is solidly grounded and operation thereof is in accordance with
13 recognized safe procedures.

14 (m) Protection from power lines.--Oxygen and gas tanks or
15 cylinders shall be protected from power lines or energized
16 electrical machinery or equipment, and such tanks or cylinders
17 shall be kept away from the place where the cutting is being
18 done in order to prevent damage or accident and to prevent heat
19 from affecting such tanks or cylinders.

20 Section 265. Duties of individuals subject to this act.

21 It shall be the duty of each operator, superintendent, mine
22 foreman, assistant mine foreman and mine examiners and other
23 officials to comply with and to see that others comply with the
24 provisions of this act. It shall be the duty of all employees to
25 comply with this act and to cooperate with management and the
26 department in carrying out its provisions. Reasonable rules and
27 regulations of an operator for the protection of employees and
28 preservation of property that are in harmony with the provisions
29 of this act and other applicable laws shall be complied with.

30 Section 266. Protective clothing.

1 (a) Goggles.--Welders and helpers shall use proper shields
2 or goggles to protect their eyes. All employees shall have
3 approved goggles or eye shields and use them where there is a
4 hazard from flying particles or other eye hazards.

5 (b) Snug-fitting clothing.--Employees engaged in haulage
6 operations and all other individuals employed around moving
7 equipment on the surface and underground shall wear snug-fitting
8 clothing.

9 (c) Gloves.--Protective gloves shall be worn when material
10 which may injure hands is handled, but gloves with gauntlet
11 cuffs shall not be worn around moving equipment.

12 (d) Protective hats.--All individuals shall wear protective
13 hats while underground and while on the surface where falling
14 objects may cause injury.

15 (e) Protective footwear.--Protective footwear shall be worn
16 by employees, officials and others while on duty in and around a
17 bituminous coal mine.

18 Section 267. Checking systems.

19 Each bituminous coal mine shall have a check-in and check-out
20 system that will provide positive identification of every
21 individual underground. An accurate record of the individuals in
22 the mine, which shall consist of a written record, a check
23 board, a time clock record or another approved method shall be
24 kept on the surface in a place that will not be affected in the
25 event of an emergency. The record shall bear a number or name
26 identical to the identification check carried by or fastened to
27 the belt of all individuals going underground.

28 Section 268. Prohibitions regarding endangering security of
29 mine.

30 (a) Prohibitions regarding ventilation.--No miner, worker or

1 other individual shall knowingly damage, obstruct or remove any
2 shaft, lamp, instrument, air course or other equipment, obstruct
3 or disrupt any portion of the mine's ventilation, carry open
4 lights, open a door closed for directing ventilation and not
5 close it again or enter any part of a mine that has been
6 endangered off. No individual shall deface, pull down or destroy
7 any notice boards, record books or mine maps.

8 (b) Smoking prohibition.--Open lights, smoking and smokers'
9 articles, including matches, are prohibited in bituminous coal
10 mines. No individual shall at any time enter a mine with or
11 carry into the mine any matches, pipes, cigars, cigarettes or
12 any device for making lights or fire not approved. In all mines
13 the operator may search or cause to be searched any individual,
14 including his clothing and material belongings, entering or
15 about to enter the mine, or inside the mine, to prevent such
16 individual from taking or carrying into the mine any of the
17 articles prohibited by this subsection.

18 (c) Intoxicated individuals.--No individual under the
19 influence of alcohol or a controlled substance shall enter into
20 or loiter about any mine. No individual shall have in his
21 possession alcohol or controlled substances while in or about
22 the mine premises. This provision shall not apply to the use of
23 medication as prescribed for that individual.

24 Section 269. Responsibility for care and maintenance of
25 equipment.

26 Equipment operators shall exercise reasonable care in the
27 operation of the equipment entrusted to them and shall promptly
28 report defects known to them.

29 Section 270. Control of dust and other inhalation hazards.

30 Individuals exposed for short periods to gas, dust, fume and

1 mist inhalation hazards shall wear approved respiratory
2 equipment. When exposure is for prolonged periods, dust shall be
3 controlled by the use of approved dust collectors or by water or
4 other approved methods.

5 Section 271. Safeguards for mechanical equipment.

6 (a) Locking.--The cutting devices of mining machines shall
7 be locked securely by mechanical means or electrical interlocks
8 while the machines are parked or being trammed. Loading machines
9 shall not be trammed with loading arms in motion except when
10 loading materials.

11 (b) Guarding.--Belt chain or rope drives and the moving
12 parts of machinery which are within seven feet of the floor,
13 ground or platform level, unless isolated, shall be guarded
14 adequately. Repair pits shall be kept covered or guarded at all
15 times when not in use. Machinery shall not be lubricated or
16 repaired while in motion, except where safe remote lubricating
17 devices are used. Machinery shall not be started until the
18 individual lubricating or repairing it has given a clear signal.
19 Guards that have been removed shall be replaced before the
20 machinery is again put into use. Provision shall be made to
21 prevent accumulation of spilled lubricants.

22 (c) Grinders.--Mechanically operated grinding wheels shall
23 be equipped with safety washers and substantial retaining hoods
24 covering two-thirds of the circumference of the wheel, and
25 goggles or eye shields shall be used. Where stationary grinders
26 are used, a tool rest shall be provided and the clearance
27 between the wheel and tool rest shall not exceed one thirty-
28 second of an inch.

29 Section 272. First aid equipment.

30 In every bituminous coal mine where individuals are employed

1 underground and in every active section of the mine, it shall be
2 the duty of the operator or superintendent of the mine to keep
3 on hand properly constructed stretchers, woolen and waterproof
4 blankets and all requisites for use in case of emergency. No
5 first aid material shall be removed or diverted without
6 authorization, except in case of accident in or about the mine.
7 It shall be the duty of the operator or superintendent to have
8 adequate ambulance service available promptly in the event of
9 injury to any employee.

10 Section 273. Fire protection.

11 (a) Firefighting equipment.--Each mine shall be provided
12 with suitable firefighting equipment adapted for the size and
13 conditions of the mine.

14 (b) Standards for firefighting equipment.--At a minimum,
15 firefighting equipment shall meet the following:

16 (1) Waterlines shall be capable of delivering 50 gallons
17 of water per minute at a nozzle pressure of 50 pounds per
18 square inch.

19 (2) A portable water car shall be of at least 1,000
20 gallons capacity and shall have at least 300 feet of fire
21 hose with nozzles. A portable water car shall be capable of
22 providing a flow through the hose of 50 gallons of water per
23 minute at a nozzle pressure of 50 pounds per square inch.

24 (3) A portable chemical car shall carry enough chemicals
25 to provide a fire extinguishing capacity equivalent to that
26 of a portable water car.

27 (4) A portable foam-generating machine or device shall
28 have facilities and equipment for supplying the machine with
29 30 gallons of water per minute at 30 pounds per square inch
30 for a period of 35 minutes.

1 (5) A portable fire extinguisher shall be either:

2 (i) A multipurpose dry chemical type containing a
3 nominal weight of five pounds of dry powder and enough
4 expellant to apply the powder.

5 (ii) A foam-producing type containing at least 2.5
6 gallons of foam-producing liquids and enough expellant to
7 supply the foam.

8 (6) Only fire extinguishers approved by the Underwriters
9 Laboratories, Inc., or Factory Mutual Research Corp.,
10 carrying appropriate labels as to the type and purpose shall
11 be used. All portable fire extinguishers shall have a 2A 10
12 BC or higher rating.

13 (7) The fire hose shall be lined with a flame-resistant
14 material. The cover shall be polyester or other material with
15 flame-spread qualities and mildew resistance equal or
16 superior to polyester. The bursting pressure shall be at
17 least four times the water pressure at the valve to the hose
18 inlet with the valve closed, and the maximum water pressure
19 in the hose nozzle shall not exceed 100 pounds per square
20 inch.

21 (c) Working sections.--

22 (1) Each working section of a mine producing 300 tons or
23 more per shift shall be provided with two portable fire
24 extinguishers and 240 pounds of rock dust in bags or other
25 suitable containers. Water lines shall extend to each section
26 loading point and be equipped with enough fire hose to reach
27 each working face unless the section loading point is
28 provided with one of the following:

29 (i) two portable water cars;

30 (ii) two portable chemical cars; or

1 (iii) one portable water car or one portable
2 chemical car, and either:
3 (A) a portable foam-generating machine; or
4 (B) a portable high-pressure rock-dusting
5 machine fitted with at least 250 feet of hose and
6 supplied with at least 60 bags of rock dust.

7 (2) Each working section of a mine producing less than
8 300 tons of coal per shift shall be provided with:

9 (i) Two portable fire extinguishers.

10 (ii) Two hundred and forty pounds of rock dust in
11 bags or other suitable containers.

12 (iii) At least 500 gallons of water and at least
13 three pails of ten-quart capacity. In lieu of the 500-
14 gallon water supply, a water line with sufficient hose to
15 reach the working places, a portable water car with a
16 500-gallon capacity or a portable all-purpose dry powder
17 chemical car of at least 125 pounds capacity may be
18 provided.

19 (d) Belt conveyors.--In all mines, water lines shall be
20 installed parallel to the entire length of belt conveyors and
21 shall be equipped with fire hose outlets with valves at 300-foot
22 intervals along each belt conveyor and at tailpieces. At least
23 500 feet of fire hose with fittings suitable for connection with
24 each belt conveyor water line system shall be stored at
25 strategic locations along the belt conveyor. Water lines may be
26 installed in entries adjacent to the conveyor entry belt as long
27 as the outlets project into the belt conveyor entry.

28 (e) Haulage tracks.--

29 (1) In a mine producing 300 tons of coal or more per
30 shift, water lines shall be installed parallel to all haulage

1 tracks using mechanized equipment in the track or adjacent
2 entry and shall extend to the loading point of each working
3 section. Water lines shall be equipped with outlet valves at
4 intervals of not more than 500 feet, and 500 feet of fire
5 hose with fittings suitable for connection with such water
6 lines shall be provided at strategic locations. Two portable
7 water cars, readily available, may be used in lieu of water
8 lines prescribed under this paragraph.

9 (2) In a mine producing less than 300 tons of coal per
10 shift, there shall be provided at 500-foot intervals in all
11 main and secondary haulage roads:

12 (i) a tank of water of at least 55-gallon capacity
13 with at least three pails of not less than ten-quart
14 capacity; or

15 (ii) not less than 240 pounds of bagged rock dust.

16 (f) Transportation.--Each track or off-track locomotive,
17 self-propelled mantrip car or personnel carrier shall be
18 equipped with one portable fire extinguisher.

19 (g) Electrical installations.--

20 (1) Two portable fire extinguishers or one extinguisher
21 having at least twice the minimum capacity specified for a
22 portable fire extinguisher specified in subsection (b)(5)
23 shall be provided at each permanent electrical installation.

24 (2) One portable fire extinguisher and 240 pounds of
25 rock dust shall be provided at each temporary electrical
26 installation.

27 (h) Oil storage stations.--Two portable fire extinguishers
28 and 240 pounds of rock dust shall be provided at each permanent
29 underground oil storage station. One portable fire extinguisher
30 shall be provided at each working section where 25 gallons or

1 more of oil is stored in addition to extinguishers required
2 under subsection (c).

3 (i) Welding, cutting and soldering.--One portable fire
4 extinguisher or 240 pounds of rock dust shall be provided at
5 locations where welding, cutting or soldering with arc or flame
6 is being done.

7 (j) Power lines.--At each wooden door through which power
8 lines pass, there shall be one portable fire extinguisher or 240
9 pounds of rock dust within 25 feet of the door on the intake air
10 side.

11 (k) Emergency materials.--

12 (1) At a mine producing 300 tons of coal or more per
13 shift, there shall be readily available the following
14 materials at locations not exceeding two miles from each
15 working section:

16 (i) One thousand board feet of brattice boards.

17 (ii) Two rolls of brattice cloth.

18 (iii) Two handsaws.

19 (iv) Twenty-five pounds of 8d nails.

20 (v) Twenty-five pounds of 10d nails.

21 (vi) Twenty-five pounds of 16d nails.

22 (vii) Three claw hammers.

23 (viii) Twenty-five bags of wood fiber plaster or ten
24 bags of cement, or equivalent material for stoppings.

25 (ix) Five tons of rock dust.

26 (2) At a mine producing less than 300 tons of coal per
27 shift, the materials set forth in this subsection shall be
28 available at the mine, provided, however, that the emergency
29 materials for one or more mines may be stored at a central
30 warehouse or building supply company and the supply must be

1 the equivalent of that required for all mines involved and
2 within an hour's delivery time from each mine. This exception
3 shall not apply where the active working sections are more
4 than two miles from the surface.

5 (l) Condition and examination of firefighting equipment.--
6 All firefighting equipment shall be maintained in a usable and
7 operative condition. Chemical extinguishers shall be examined
8 every six months, and the date of the examination shall be
9 written on a permanent tag attached to the extinguisher.

10 (m) Branch lines.--As a part of the deluge-type water spray
11 system, two or more branch lines of nozzles shall be installed.
12 The maximum distance between nozzles shall not exceed eight
13 feet.

14 (n) Installation of foam generator systems.--

15 (1) Foam generator systems shall be located so as to
16 discharge foam to the belt drive, belt take-up, electrical
17 controls, gear-reducing unit and conveyor belt.

18 (2) Foam generator systems shall be equipped with a fire
19 sensor which actuates the system, and each system shall be
20 capable of producing and delivering the following amounts of
21 foam within five minutes:

22 (i) At fire-resistant belt installations, an amount
23 which will fully envelop the belt drive, belt take-up,
24 electrical controls, gear-reducing unit and conveyor belt
25 over a distance of 50 feet.

26 (ii) At non-fire-resistant belt installations, an
27 amount which will fully envelop the belt drive, belt
28 take-up electrical controls, gear-reducing unit and
29 conveyor belt over a distance of 150 feet.

30 (3) The foam generator shall be equipped with a warning

1 device designed to stop the belt drive when a fire occurs,
2 and all such warning devices shall be capable of giving both
3 an audible and visual signal when actuated by fire.

4 (4) Water, power and chemicals required shall be
5 adequate to maintain water or foam flow for no less than 25
6 minutes.

7 (5) Water systems shall include strainers with a flush-
8 out connection and a manual shut-off valve.

9 (o) Water sprinkler systems.--Water sprinkler systems may be
10 installed to protect main and secondary belt-conveyor drives,
11 however, where such systems are employed, they shall be
12 installed and maintained in accordance with subsections (p),
13 (q), (r), (s) and (t).

14 (p) Installation of water sprinkler systems.--

15 (1) The fire-control components of each water sprinkler
16 system shall be installed, as far as practicable, in
17 accordance with the recommendations set forth in the National
18 Fire Protection Association, Code No. 13, entitled
19 "Installation of Sprinkler Systems," in effect at the time of
20 installation, and such systems' components shall be of a type
21 approved by the Underwriters Laboratories, Inc., Factory
22 Mutual Research Corporation.

23 (2) Each sprinkler system shall provide protection for
24 the motor drive belt take-up, electrical controls, gear-
25 reducing unit and 50 feet of fire-resistant belt or 150 feet
26 of non-fire-resistant belt adjacent to the belt drive.

27 (3) The components of each water sprinkler system shall
28 be located so as to minimize the possibility of damage by
29 roof fall or by the moving belt and its load.

30 (q) Arrangement of sprinklers.--

1 (1) At least one sprinkler shall be installed above each
2 belt drive, belt take-up, electrical control and gear-
3 reducing unit, and individual sprinklers shall be installed
4 at intervals of no more than eight feet along all conveyor
5 branch lines.

6 (2) Two or more branch lines, at least one of which
7 shall be above the top belt and one between the top and
8 bottom belt, shall be installed in each sprinkler system to
9 provide a uniform discharge of water to the belt surface.

10 (3) The water discharge rate from the sprinkler system
11 shall not be less than .25 gallon per minute per square foot
12 of the top surface of the top belt, and the discharge shall
13 be directed at both the upper and bottom surfaces of the top
14 belt and to the upper surface of the bottom belt. The supply
15 of water shall be adequate to provide a constant flow of
16 water for ten minutes with all sprinklers functioning.

17 (4) Each individual sprinkler shall be activated at a
18 temperature of not less than 150 degrees Fahrenheit and not
19 more than 300 degrees Fahrenheit.

20 (5) Water systems shall include strainers with a flush-
21 out connection and a manual shutoff valve.

22 (r) Backup water system.--One fire hose outlet together with
23 a length of hose capable of extending to the belt drive shall be
24 provided within 300 feet of each belt drive.

25 (s) Fire warning devices at belt drives.--Each water
26 sprinkler system shall be equipped with a device designed to
27 stop the belt drive in the event of a rise in temperature, and
28 each warning device shall be capable of giving both an audible
29 and visual warning when a fire occurs.

30 (t) Examination and test.--Each water sprinkler system shall

1 be examined weekly, and a functional test of the complete system
2 shall be conducted at least once each year.

3 (u) Equivalent dry-pipe system.--Where water sprinkler
4 systems are installed to protect main and secondary belt
5 conveyor drives and freezing temperatures prevail, an equivalent
6 dry-pipe system may be installed.

7 (v) Dry-powder chemical systems.--Self-contained dry-powder
8 chemical systems may be installed to protect main and secondary
9 belt conveyor drives; however, where self-contained dry-powder
10 chemical systems are employed, they shall be installed and
11 maintained in accordance with the provisions of subsections (w),
12 (x), (y), (z), (aa), (bb), (cc) and (dd).

13 (w) Installation of dry-powder chemical systems.--

14 (1) Self-contained dry-powder chemical systems shall be
15 installed to protect each beltdrive, belt take-up, electrical
16 controls, gear-reducing units and 50 feet of fire-resistant
17 belt or 150 feet of non-fire-resistant belt adjacent to the
18 belt drive.

19 (2) The fire control components of each dry-powder
20 chemical system shall be a type approved by the Underwriters
21 Laboratories, Inc., or Factory Mutual Engineering
22 Corporation.

23 (3) The components of each dry-powder chemical system
24 shall be located so as to minimize the possibility of damage
25 by roof fall or by the moving belt and its load.

26 (x) Construction of dry-powder chemical systems.--

27 (1) Each self-contained dry-powder system shall be
28 equipped with hose or pipe lines which are no longer than
29 necessary.

30 (2) Metal piping and hose between control valves and

1 nozzles shall have a minimum bursting pressure of 500 pounds
2 per square inch.

3 (3) Hose shall be protected by wire braid or its
4 equivalent.

5 (4) Nozzles and reservoirs shall be sufficient in number
6 to provide maximum protection to each belt, belt take-up,
7 electrical controls and gear-reducing unit.

8 (5) Each belt shall be protected on the top surface of
9 both the top and bottom belts and the bottom surface of the
10 top belt.

11 (y) Sensing and fire-suppression devices.--

12 (1) Each self-contained dry-powder chemical system shall
13 be equipped with sensing devices which shall be designed to
14 activate the fire control system, sound an alarm and stop the
15 conveyor drive motor in the event of a rise in temperature,
16 and provision shall be made to minimize contamination of the
17 lens of any optical sensing device installed in the system.

18 (2) Where sensors are operated from the same power
19 source as the belt drive, each sensor shall be equipped with
20 a standby power source which shall be capable of remaining
21 operative for at least four hours after a power cutoff.

22 (3) Sensor systems shall include a warning indicator or
23 test circuit which shows it is operative.

24 (4) Each fire suppression system shall be equipped with
25 a manually operated control valve which shall be independent
26 of the sensor.

27 (z) Dry powder requirements.--Each dry powder chemical
28 system shall contain the following minimum amounts of
29 multipurpose dry powder:

30 (1) One hundred and twenty-five pounds of dry powder for

1 fire resistant belts.

2 (2) Two hundred and twenty-five pounds of dry powder for
3 non-fire-resistant belts.

4 (aa) Nozzles, flow rate and direction.--The nozzles of each
5 dry-powder chemical system shall be capable of discharging all
6 powder within one minute after actuation of the system, and such
7 nozzles shall be directed so as to minimize the effect of
8 ventilation upon fire control.

9 (bb) Safeguards for dry-powder chemical systems.--Adequate
10 guards shall be provided along all belt conveyors in the
11 vicinity of each dry-powder chemical system to protect
12 individuals whose vision is restricted by a discharge of powder
13 from the system. Handrails shall be installed in these areas to
14 provide assistance to those passing along the conveyor after a
15 powder discharge.

16 (cc) Backup water system.--One fire hose outlet, together
17 with a length of hose capable of extending to the belt drive,
18 shall be provided within 300 feet of each belt drive.

19 (dd) Inspection of dry-powder chemical systems.--

20 (1) Each dry-powder chemical system shall be examined
21 weekly, and a functional test of the complete system shall be
22 conducted at least once each year.

23 (2) Where the dry-powder chemical system has been
24 actuated, all components of the system shall be cleaned
25 immediately by flushing all powder from pipes and hoses, and
26 all hose damaged by fire shall be replaced.

27 Section 274. Mine openings or outlets.

28 ~~(a) Openings or outlets to the surface. It shall be~~ <—
29 ~~unlawful for the operator, superintendent or mine foreman to~~
30 ~~employ an individual to work in the mine unless there are no~~

1 fewer than two intake openings or outlets to the surface from
2 every seam of coal being worked. The openings or outlets shall
3 have a distinct means of ingress and egress available, at all
4 times, for use by the employees. The two intake openings or
5 outlets to the surface required by this section shall not be at
6 a common shaft, slope or drift opening. Mines in operation prior
7 to the effective date of this act are not subject to the
8 requirements under this subsection.

9 (b) Exception. The requirements of subsection (a) shall not
10 apply to the openings or outlets of a new mine being worked for
11 the purpose of making connections between the openings or
12 outlets, so long as no more than 20 individuals are employed in
13 making the connections.

14 (c) Shaft, slope and drift distances. The distance between
15 shafts shall be not less than 200 feet. The distance between the
16 openings to the surface of slopes shall be not less than 150
17 feet. The distance between drifts shall be not less than 50
18 feet. Exceptions to the distance requirements specified in this
19 subsection may be granted with the written consent of the
20 department. The passageways between openings or outlets shall be
21 maintained in a safe and available condition for the employees
22 to travel. The pillars in entries between the openings or
23 outlets shall not be removed.

24 (d) Number of entries. Every mine shall have no fewer than
25 five main entries connected to the openings or outlets to the
26 surface.

27 (A) MINE OPENINGS OR OUTLETS. IT SHALL BE UNLAWFUL FOR THE <—
28 OPERATOR, SUPERINTENDENT OR MINE FOREMAN OF A MINE TO EMPLOY ANY
29 INDIVIDUAL TO WORK IN THE MINE UNLESS THERE ARE TWO OPENINGS OR
30 OUTLETS TO THE SURFACE FROM EVERY SEAM OF COAL BEING WORKED, AND

1 ~~AVAILABLE FROM EVERY SEAM OF COAL ENTRY, WHICH OPENINGS OR~~
2 ~~OUTLETS SHALL HAVE DISTINCT MEANS OF INGRESS AND EGRESS~~
3 ~~AVAILABLE AT ALL TIMES FOR THE USE BY THE EMPLOYEES. THE TWO~~
4 ~~OPENINGS TO THE SURFACE REQUIRED BY THIS SECTION SHALL NOT BE AT~~
5 ~~A COMMON SHAFT, SLOPE, OR DRIFT OPENING, EXCEPT THAT MULTIPLE~~
6 ~~COMPARTMENT SHAFTS OR SLOPES SEPARATED BY SUBSTANTIALLY~~
7 ~~CONSTRUCTED WALLS OF NONCOMBUSTIBLE MATERIAL SHALL BE CONSIDERED~~
8 ~~AS TWO SEPARATE AND DISTINCT OPENINGS. THE DISTANCE BETWEEN TWO~~
9 ~~SHAFTS SHALL NOT BE LESS THAN 200 FEET, THE DISTANCE BETWEEN THE~~
10 ~~OPENINGS TO THE SURFACE OF SLOPES SHALL NOT BE LESS THAN 150~~
11 ~~FEET AND THE DISTANCE BETWEEN DRIFTS SHALL NOT BE LESS THAN 50~~
12 ~~FEET, PROVIDED THAT THE DISTANCE BETWEEN THE OPENINGS SHALL~~
13 ~~APPLY ONLY TO MINES OPENED AFTER THE EFFECTIVE DATE OF THIS ACT.~~
14 ~~THE DISTANCES SPECIFIED MAY BE LESS WITH THE WRITTEN CONSENT OF~~
15 ~~THE DEPARTMENT. THE PASSAGEWAYS BETWEEN THE TWO SHAFTS SHALL AT~~
16 ~~ALL TIMES BE MAINTAINED IN SAFE AND AVAILABLE CONDITION FOR THE~~
17 ~~EMPLOYEES TO TRAVEL, AND THE PILLARS IN ENTRIES BETWEEN THE TWO~~
18 ~~OPENINGS SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE~~
19 ~~DEPARTMENT.~~

20 ~~(B) OPENINGS. THE REQUIREMENTS OF SUBSECTION (A) SHALL NOT~~
21 ~~APPLY TO THE OPENINGS OF A NEW MINE, OR TO THE OPENINGS OF A NEW~~
22 ~~ENTRY OF AN EXISTING MINE, THAT IS BEING WORKED FOR THE PURPOSE~~
23 ~~OF MAKING CONNECTION BETWEEN THE TWO OUTLETS, AS LONG AS NOT~~
24 ~~MORE THAN 20 INDIVIDUALS ARE EMPLOYED AT ANY ONE TIME IN MAKING~~
25 ~~THE CONNECTION OR DRIVING THE SECOND OPENING. THE REQUIREMENTS~~
26 ~~OF SUBSECTION (A) SHALL NOT APPLY TO ANY MINE IN WHICH THE~~
27 ~~SECOND OPENING HAS BEEN RENDERED UNAVAILABLE BY REASON OF THE~~
28 ~~FINAL ROBBING OR REMOVING OF PILLARS, AS LONG AS NOT MORE THAN~~
29 ~~20 INDIVIDUALS ARE EMPLOYED IN THE MINE AT ANY ONE TIME.~~

30 ~~(C) SAFE EGRESS. SAFE MEANS OF EGRESS SHALL BE AVAILABLE AT~~

1 ~~ALL TIMES FOR THE INDIVIDUALS EMPLOYED IN A MINE THAT HAS NO~~
2 ~~SECOND OUTLET AVAILABLE.~~

3 ~~(D) ENTRIES. EVERY MINE SHALL HAVE AT LEAST FIVE MAIN~~
4 ~~ENTRIES, TWO OF WHICH SHALL LEAD FROM THE MAIN OPENING AND TWO~~
5 ~~OF WHICH SHALL LEAD FROM THE SECOND OPENING INTO THE BODY OF THE~~
6 ~~MINE. THE FIFTH, WHICH MAY BE CONNECTED WITH AN OPENING TO THE~~
7 ~~SURFACE OR WITH THE INTAKE AIRWAY AT OR NEAR THE MAIN INTAKE~~
8 ~~OPENING, SHALL BE USED EXCLUSIVELY AS A TRAVELINGWAY FOR THE~~
9 ~~EMPLOYEES.~~

10 (A) OPENINGS OR OUTLETS TO THE SURFACE.--IT SHALL BE <—
11 UNLAWFUL FOR THE OPERATOR, SUPERINTENDENT OR MINE FOREMAN TO
12 EMPLOY AN INDIVIDUAL TO WORK IN THE MINE UNLESS THERE ARE NO
13 FEWER THAN TWO INTAKE OPENINGS OR OUTLETS TO THE SURFACE FROM
14 EVERY SEAM OF COAL BEING WORKED. THE OPENINGS OR OUTLETS SHALL
15 HAVE A DISTINCT MEANS OF EGRESS AVAILABLE FOR USE BY THE
16 EMPLOYEES. THE TWO INTAKE OPENINGS OR OUTLETS TO THE SURFACE
17 REQUIRED BY THIS SECTION SHALL NOT BE AT A COMMON SHAFT, SLOPE
18 OR DRIFT OPENING. MINES IN OPERATION PRIOR TO THE EFFECTIVE DATE
19 OF THIS ACT ARE NOT SUBJECT TO THE REQUIREMENTS UNDER THIS
20 SUBSECTION.

21 (B) EXCEPTION.--THE REQUIREMENTS OF SUBSECTION (A) SHALL NOT
22 APPLY TO THE OPENINGS OR OUTLETS OF A NEW MINE BEING WORKED FOR
23 THE PURPOSE OF MAKING CONNECTIONS BETWEEN THE OPENINGS OR
24 OUTLETS, SO LONG AS NO MORE THAN 20 INDIVIDUALS ARE EMPLOYED IN
25 MAKING THE CONNECTIONS.

26 (C) SHAFT, SLOPE AND DRIFT DISTANCES.--THE DISTANCE BETWEEN
27 SHAFTS SHALL BE NOT LESS THAN 200 FEET. THE DISTANCE BETWEEN THE
28 OPENINGS TO THE SURFACE OF SLOPES, AND THE DISTANCE BETWEEN
29 DRIFTS, SHALL BE NOT LESS THAN 50 FEET. EXCEPTIONS TO THE
30 DISTANCE REQUIREMENTS SPECIFIED IN THIS SUBSECTION MAY BE

1 GRANTED WITH THE WRITTEN CONSENT OF THE DEPARTMENT. THE
2 PASSAGEWAYS BETWEEN OPENINGS OR OUTLETS SHALL BE MAINTAINED IN A
3 SAFE AND AVAILABLE CONDITION FOR THE EMPLOYEES TO TRAVEL. THE
4 PILLARS IN ENTRIES BETWEEN THE OPENINGS OR OUTLETS SHALL NOT BE
5 REMOVED.

6 (D) NUMBER OF ENTRIES.--EVERY MINE SHALL HAVE NO FEWER THAN
7 FIVE MAIN ENTRIES CONNECTED TO THE OPENINGS OR OUTLETS TO THE
8 SURFACE.

9 (e) Intake and return entries.--The intake and return
10 entries shall be kept reasonably drained and reasonably free
11 from refuse and obstructions of all kinds, so that individuals
12 may safely travel throughout their whole length and have a safe
13 means of egress from workings in case of emergency. The entries
14 shall be separated by pillars of coal of sufficient strength.
15 When the coal seam height is less than four and one-half feet,
16 employees shall be provided a means of transportation in and out
17 of the mine.

18 (f) Passageway between workings.--In every slope with
19 workings on both sides, an overpass or underpass not less than
20 five feet wide and five feet high shall be provided as a
21 passageway for the use of employees to cross from one side of
22 the slope to the other. The overpass or underpass shall connect
23 with available passageways leading to the workings on both sides
24 of the slope. The intervening strata between the slope and the
25 overpass or underpass shall be of sufficient strength at all
26 points to insure safety to the employees, provided, however,
27 that if it is impracticable to drive an overpass or an underpass
28 in the solid, an overpass or underpass, if substantially built
29 with masonry or other incombustible material, will be deemed
30 sufficient.

1 (g) Shafts less than 100 feet deep.--If the opening or
2 outlet other than the main opening is a shaft not more than 100
3 feet in depth and is used by employees for the purpose of
4 ingress to or egress from the mine, it shall be kept available
5 and in safe condition, free from dangerous gases and all
6 obstruction, and shall be fitted with safe and convenient
7 stairways, with steps of an average tread of ten inches and a
8 rise of nine inches, not less than two feet in width and not to
9 exceed an angle of 45 degrees, and with landings not less than
10 24 inches in width and four feet in length, at easy and
11 convenient distances. Stairways shall be made safe by having
12 handrails of suitable material placed on one side, or on both
13 sides when requested by the department, and shall be inspected
14 every 24 hours by a certified mine official employed for that
15 purpose. Water that may come from the surface or from the strata
16 in the shaft shall be conducted away so it will not fall on the
17 stairways or on individuals while descending or ascending them.

18 (h) Shafts more than 100 feet deep.--When a mine is operated
19 by a shaft more than 100 feet in depth, the individuals employed
20 in the shaft shall be lowered and hoisted by means of machinery
21 unless the second opening is a drift or a slope. When the
22 employees are lowered into or hoisted from the mine at the main
23 shaft opening, the second opening, if a shaft, shall be supplied
24 with a stairway, constructed in the manner designated in this
25 section or with suitable machinery for safely lowering and
26 hoisting individuals in case of an emergency. THE EMERGENCY <—
27 HOISTING CAPABILITY MAY BE ACCOMPLISHED BY THE USE OF AN
28 ESCAPEWAY CAPSULE WITH A MINIMUM CAPACITY OF TWO PERSONS.

29 (i) Slope openings.--At any mine where one of the openings
30 required is a slope and is used as a means of ingress and egress

1 by the employees, and where the angle of descent of the slope
2 exceeds 15 degrees and its length from the mouth of the opening
3 exceeds 1,000 feet, the employees shall be lowered into and
4 hoisted from the mine at a speed not to exceed six miles per
5 hour. At any mine where the angle of descent of the slope
6 averages from five to 15 degrees and its length exceeds 3,000
7 feet, the employees shall be lowered into and hoisted from the
8 mine at a speed not to exceed six miles per hour, provided,
9 however, that when a separate travelingway is provided at any
10 such slope, the owner or operator may, at the owner's or
11 operator's option, be exempt from the requirements of this
12 section if the angle of the travelingway does not exceed 20
13 degrees.

14 Section 275. Mining close to abandoned workings.

15 The superintendent shall not permit the mining of coal in any
16 seam the entire distance to a permit boundary, not including
17 boundaries around reservations or along crop lines, when on the
18 adjoining property there are mine workings in the seam within
19 3,000 feet of the permit boundary. A barrier pillar shall be
20 left, from the operation to the permit boundary, of not less
21 than ten feet plus two feet for every foot or part of a foot of
22 thickness of the bed measured from the roof to the floor, plus
23 five feet for each 100 feet or part of 100 feet of cover over
24 the bed at the permit boundary. If the coal on one side of the
25 permit boundary has been mined, prior to the effective date of
26 this section, closer to the permit boundary than permitted, the
27 barrier pillar to be left in the mine approaching the permit
28 boundary shall be at least equal, when added to that already
29 left in the adjoining mine, to that required on both sides of
30 the permit boundary. If, in the opinion of the department or the

1 superintendent of either mining property, the barrier pillar is
2 deemed insufficient, after due notice to the operator of the
3 adjoining mining property, one-half of the barrier pillar shall
4 be left on each side of the permit boundary, except as provided
5 in this section. The department, the superintendent or owner of
6 either mining property shall determine the thickness necessary
7 to afford safety and protection. If it is agreed by the
8 department and superintendents of the adjoining coal mining
9 properties that the permit boundary is so located that there is
10 no danger to property or lives in mining coal on either or both
11 sides of the permit boundary up to the permit boundary, then
12 mining to the permit boundary shall be lawful if all danger from
13 accumulated water and gas shall have first been removed by
14 driving a passageway to tap and drain off any accumulations of
15 water and gas, as provided for in this act.

16 Section 276. Lubrication and storage of flammable lubricants.

17 The oiling or greasing of any cars inside any mine is
18 strictly prohibited unless the place where the oil or grease is
19 used is thoroughly cleaned at least once a day to prevent the
20 accumulation of waste oil or grease. Not more than two days'
21 supply of flammable oil or lubricant shall be stored in any
22 portion of a mine unless it is kept in a fireproof building or a
23 structure cut out of solid rock. Oil or grease stored in the
24 face area shall be kept in approved containers and away from
25 power wires and electric equipment. Accumulations of spilled oil
26 or grease shall be rendered harmless. Excessive accumulations
27 shall be removed from the mine. Closed metal containers shall be
28 provided for the storage of oily rags or waste until removed for
29 disposal. If any flammable oil or lubricants are stored
30 underground, all reasonable safety practices shall be observed

1 in order to minimize any dangers of fire.

2 Section 277. Approved lighting and gas detection devices in
3 mines.

4 (a) Lighting.--It shall be unlawful to use open lights in
5 mines, and only approved electric cap lamps, approved
6 flashlights, approved safety lamps and other approved lighting
7 equipment shall be used in mines.

8 (b) Gas detection devices.--All approved gas detection
9 devices used for examining mines shall be in the care of the
10 mine foreman or some other competent individual appointed by the
11 mine foreman, who shall have a duty to examine, test and deliver
12 them in a safe condition to the individuals when entering the
13 mine and to receive gas detection devices from the individuals
14 when returning from work.

15 (c) Number of devices.--At every mine, a sufficient number
16 of approved gas detection devices shall be kept in good
17 condition for use in case of emergency.

18 (d) Entrusting of devices.--No approved gas detection
19 devices shall be entrusted to any individual for use in a mine
20 until the individual has given satisfactory evidence to the mine
21 foreman that he understands the proper use of the gas detection
22 device and the danger of tampering with the device.

23 (e) Duty to return device.--It shall be the duty of every
24 individual who knows their approved gas detection device is
25 defective to return it immediately to a mine official.

26 Section 278. Unauthorized entry into mine.

27 Any individual who enters a mine without authorization from
28 the superintendent commits a misdemeanor of the second degree.
29 This section shall not be applicable to any individual who
30 enters a mine in the performance of any duty imposed upon him by

1 this act.

2 Section 279. Passing by or removing danger signs.

3 Except as specifically authorized in this act, no employee or
4 other individual shall pass by any danger sign into any mine, or
5 into any portion of any mine, or remove any danger sign before
6 the mine or portion of the mine has been examined and reported
7 to be safe. Any employee or other individual shall not pass by
8 any danger sign placed at the entrance to a working place, or
9 any other place in the mine, or remove the danger sign without
10 permission from the mine foreman, the assistant mine foreman or
11 the mine examiner.

12 Section 280. Miners to remain in work areas.

13 Each miner shall remain during working hours in the work area
14 assigned by the mine foreman or the assistant mine foreman.

15 Section 281. Sealing openings.

16 (a) Permanently abandoned shafts.--Every shaft permanently
17 abandoned shall be filled for its entire depth. The fill shall
18 extend from the bottom of the coal seam to a height of 50 feet
19 with incombustible material.

20 (b) Out of service openings.--Every slope, drift or tunnel
21 permanently taken out of service shall be filled for a distance
22 of 25 feet with incombustible material.

23 (c) Drillholes and boreholes.--All drillholes and boreholes
24 permanently taken out of service after the effective date of
25 this act shall be effectively plugged or sealed.

26 (d) Openings available for future use.--Every shaft, slope,
27 drift or tunnel, temporarily taken out of service, which may be
28 used for future mining purposes shall be properly sealed or
29 fenced.

30 Section 282. Ladders in mines.

1 Permanently installed ladders in mines that are more than ten
2 feet in length and set on an angle of 60 degrees or more with
3 the horizontal shall be provided with substantial backguards,
4 and all ladders shall be maintained in good repair.

5 Section 283. Inside structures to be of incombustible
6 materials.

7 All buildings or structures in any bituminous coal mine shall
8 be constructed of incombustible materials.

9 Section 284. Washhouses.

10 It shall be the duty of the operator or superintendent of a
11 mine to provide a suitable building, convenient to the principal
12 entrance of the mine, for the use of employees of the mine to
13 wash and change clothes. The building shall be maintained in
14 good order and be properly lighted and heated, shall be provided
15 with hot and cold running water and facilities for individuals
16 to wash and shall include adequate sanitary facilities. The cost
17 of providing and maintaining the conveniences and facilities
18 shall be defrayed by the owner or operator of mine.

19 CHAPTER 3

20 ELECTRICAL EQUIPMENT

21 Section 301. Duties of mine foreman and superintendent.

22 It shall be the duty of the mine foreman and superintendent
23 to see that the requirements of this chapter for the
24 installation and maintenance of electrical equipment are
25 observed in and around coal mines.

26 Section 302. Definitions.

27 As used in this chapter, the following words and terms shall
28 have the meanings given to them in this section unless the
29 context clearly indicates otherwise:

30 "Armored cable." A cable provided with a wrapping of metal,

1 usually steel wires or tapes, primarily for the purpose of
2 mechanical protection.

3 "Borehole cable." A cable designed for vertical suspension
4 in a borehole or shaft and is used for power circuits in a mine.

5 "Branch circuit." A tap taken off a main circuit.

6 "Cable sheath." A covering consisting of composition tapes,
7 compound jackets of natural or synthetic rubber, or
8 thermoplastic or fiber braids applied over the conductor
9 assembly and insulation of multiple conductor cables.

10 "Circuit breaker." A device which may be controlled by
11 relaying or protective equipment for interrupting a circuit
12 between separable contacts under normal or abnormal conditions.

13 "Delta-connected." A delta-connected power system is one in
14 which the windings of transformers or AC generators are
15 connected to form a triangular phase relationship, with the
16 phase conductors connected to each point of the triangle.

17 "Difference of potential." The difference of electrical
18 pressure or electromotive force existing between any two points
19 of an electrical system, or between any point of a system and
20 the earth, as determined by a voltmeter or other suitable
21 instrument.

22 "Effectively grounded." Grounded through a grounding
23 connection of sufficiently low impedance, inherent or
24 intentionally added, or both, so that fault grounds which may
25 occur cannot build up voltages in excess of limits established
26 for apparatus, circuits or systems so grounded.

27 "Electric system." All electric equipment and circuits that
28 pertain to the operation of the mine and are under control of
29 the mine management.

30 "Electrical face equipment." Mobile or portable mining

1 machinery having electric motors or accessory equipment normally
2 installed or operated in by the last open crosscut in any entry
3 or room.

4 "Explosion-proof or flame-proof." Casings or enclosures
5 which, when completely filled with a mixture of methane and air
6 and the same exploded, are capable of either entirely confining
7 the products of the explosion within the casing or discharging
8 them from the casing so that they cannot ignite a mixture of
9 methane and air, combined in proportions most sensitive to
10 ignition and entirely surrounding the points of discharge, and
11 in most intimate proximity with the points of discharge.

12 "Flame-resistant cable." A cable that meets the MSHA testing
13 requirements for flame resistance and has been assigned an
14 approval. A cable shall also be considered flame-resistant if it
15 meets the criteria for flame resistance by a nationally
16 recognized testing lab that is equivalent to the MSHA testing
17 criteria and that is appropriately identified. All flame-
18 resistant cables used underground shall have the approval number
19 embossed or indented on the jacket at intervals not to exceed 12
20 feet.

21 "Ground." A conducting connection, whether intentional or
22 accidental, between an electric circuit or equipment and earth
23 or to some conducting body which serves in place of the earth.

24 "Grounding conductor." A metallic conductor used to connect
25 the metal frame or enclosure of an equipment, device or wiring
26 system with an effective grounding medium.

27 "High voltage." Voltage higher than 1,000 volts nominal.

28 "Lightning arrestor." A protective device for limiting surge
29 voltages on equipment by discharging or bypassing surge current
30 and for preventing continued flow of current to ground.

1 "Low voltage." Voltage up to 660 volts nominal.

2 "Machine operator." An individual who possesses a machine
3 runners certification and is placed in charge of a portable or
4 mobile face machine of any sort where a gas examination is
5 required under this act or regulations promulgated under this
6 act.

7 "Medium voltage." Voltage from 661 to 1,000 volts nominal.

8 "Mine power center." A combined transformer and distribution
9 unit which may include a rectifier, complete within a metal
10 enclosure, from which one or more low-voltage, medium-voltage or
11 high-voltage power circuits are taken.

12 "Neutral." A neutral point of connection established through
13 the use of a grounding or zig-zag transformer with a normally
14 ungrounded delta power system.

15 "Neutral point." The connection point of transformer or
16 generator windings from which the voltage to ground is nominally
17 zero and is the point generally used for system grounding in a
18 wye-connected AC power system.

19 "Nonmetallic armor." A tough outer covering or cable sheath
20 of rubber, rubber compound or thermoplastic designed to protect
21 the cable conductors and insulation from abrasion or other
22 damage from external sources.

23 "Portable trailing cable." A flexible cable or cord used for
24 connecting mobile, portable or stationary equipment in mines to
25 a trolley system or other external source of electric energy
26 where permanent mine wiring is prohibited or impracticable.

27 "Potential of a circuit." The voltage of a circuit machine
28 or any piece of electrical apparatus is the potential difference
29 normally existing between the conductors of such circuit or the
30 terminals of the machine or apparatus.

1 "Primary ground." A low impedance ground bed or system
2 consisting of several interconnected ground rods or buried
3 conducting mesh, or both, located near an outdoor substation and
4 used as a lightning arrestor or station ground or, separately,
5 as a basic ground for one conductor of a power transmission or
6 distribution system. A single ground rod of any length is not
7 considered a primary ground.

8 "Protection." Fuses or other suitable automatic circuit-
9 interrupting devices for preventing damage to circuits,
10 equipment and personnel by abnormal conditions, such as over-
11 current, high or low voltage and single phasing.

12 "Rectifiers." Alternating current to direct-current power
13 conversion devices of the mercury-arc, silicon, selenium or
14 other type.

15 "Shielded cable." A cable in which the insulated conductor is
16 covered with a conductive material for the purpose of clearing
17 ground faults.

18 "Voltage." The phase-to-phase or line-to-line root-mean-
19 square value assigned to a circuit or system for designation as
20 its voltage class. Actual voltage at which the circuit or
21 systems operated may vary from the normal voltage with a range,
22 which permits satisfactory operation of the equipment. The
23 difference of electrical pressure or electromotive force
24 existing between any two points of an electrical system, or
25 between any point of a system and earth, as determined by a volt
26 meter or other instrument. The term shall be synonymous with the
27 term potential and shall mean electrical pressure.

28 "Wye-connected." A system in which one end of each phase
29 winding of transformers or AC generators are connected together
30 to form a neutral point, and the other ends of the windings are

1 connected to the phase conductors.

2 "Zig-zag transformer." A three-phase transformer used to
3 provide a neutral point on delta systems and capable of carrying
4 continuously the maximum ground fault current of the system.

5 Section 303. Plan of electrical system.

6 A plan shall be kept at the mine showing the location of all
7 stationary electrical apparatus in connection with the mine
8 electrical system, including permanent cables, conductors,
9 switches and trolley lines. The plan shall be of sufficient size
10 to show clearly the position of the apparatus, and the scale
11 shall not be less than 500 feet per inch. There shall be stated
12 on the plan the capacity in horsepower of each motor, and in
13 kilowatts of each generator, rectifier or transformer, and the
14 nature of its duty. The plans shall be corrected as often as may
15 be necessary to keep them up to date or at intervals not
16 exceeding six months.

17 Section 304. Protection against shock.

18 (a) Electrical work.--No electrical work shall be performed
19 on low-voltage, medium-voltage or high-voltage distribution
20 circuits or equipment except by a qualified individual or by an
21 individual trained to perform electrical work and to maintain
22 electrical equipment under the direct supervision of a qualified
23 individual. Disconnecting devices shall be locked out and
24 suitably tagged by the individuals who perform the work, except
25 that in cases where locking out is not possible, the devices
26 shall be opened and suitably tagged by such individuals. Locks
27 or tags shall be removed only by the individual who installed
28 them or, if the individuals are unavailable, by an individual
29 authorized by the operator or the operator's agent.

30 (b) Insulating materials.--Mats of rubber, insulated

1 platform or other suitable insulating materials shall be
2 provided at all stationary transformers, rectifiers, motors and
3 generators and their controls, except portable and mobile
4 equipment. Gloves or mats of rubber or other suitable insulating
5 material shall be provided by the operator and used by qualified
6 individuals when energized parts of electrical apparatus have to
7 be handled for the purpose of adjustment.

8 Section 305. Restoration from shock.

9 Instruction shall be posted in every generating, transforming
10 and motor room and at the entrance to the mine containing
11 directions as to the restoration of individuals suffering from
12 electric shock. All employees working in connection with
13 electrical apparatus shall be familiar with and competent to
14 carry out the instructions.

15 Section 306. Report of defective equipment.

16 In the event of a breakdown or damage or injury to any
17 portion of the electrical equipment in a mine, overheating, the
18 appearance of sparks or arcs outside enclosed casings or in the
19 event of any portion of the equipment not a part of the
20 electrical circuit becoming energized, the equipment shall be
21 disconnected from its source of power, the occurrence shall be
22 promptly reported to a mine official and the equipment shall not
23 be used again until necessary repairs are made.

24 Section 307. Damage or alteration to mine electrical system.

25 No individual shall willfully damage or without authority
26 alter or make connections to any portion of a mine electrical
27 system.

28 Section 308. Capacity.

29 All electrical apparatus and conductors shall be sufficient
30 in size and power for the work they may be called upon to do

1 and, as prescribed in this act, be efficiently covered or
2 safeguarded. The electrical apparatus and conductors shall be
3 installed, operated and maintained to reduce danger from
4 accidental shock or fire to the minimum and shall be constructed
5 and operated so that the rise in temperature caused by ordinary
6 operation will not injure the insulating materials. Where these
7 conditions are not met, affected equipment shall be removed from
8 service until corrective action is taken.

9 Section 309. Joints in conductors.

10 All joints in conductors shall be mechanically and
11 electrically efficient. Suitable connectors or screw clamps
12 shall be used. All joints in insulated wire shall, after the
13 joint is complete, be reinsulated to at least the same extent as
14 the remainder of the wire.

15 Section 310. Cables entering fittings.

16 The exposed ends of cables where they enter fittings of any
17 description shall be protected and finished off so that moisture
18 cannot enter the cable, or the insulating material, if of an
19 oily or viscous nature, leak. Where unarmored cables or wires
20 pass through metal frames or into boxes or motor casings, the
21 holes shall be substantially bushed with insulating bushings
22 and, where necessary or required, with gas-tight bushings which
23 cannot readily become displaced.

24 Section 311. Switches, fuses and circuit breakers.

25 (a) Construction.--Fuses and automatic circuit breakers
26 shall be constructed as to effectively interrupt the current on
27 short circuit or when the current through them exceeds a
28 predetermined value. Open type fuses shall be provided with
29 terminals. Circuit breakers shall be of adequate interrupting
30 capacity.

1 (b) Trip setting.--Circuit breakers used to protect feeder
2 circuits shall be set to trip when the current exceeds by more
3 than 50% of the rated capacity of the feeder. In case the feeder
4 is subjected to overloads sufficient to trip the circuit breaker
5 but of short duration, the circuit breaker may be equipped with
6 a device which will prevent its acting unless the overload
7 persists for period longer than ten seconds. Trip current shall
8 be indicated at the circuit breaker.

9 (c) Fuses.--Fuses shall be stamped or marked or shall have a
10 label attached indicating the maximum current which they are
11 intended to carry. Fuses shall only be adjusted or replaced by a
12 competent individual authorized by the mine foreman.

13 (d) Protective fuses.--Fuses used to protect feeders shall
14 be a less current rating than the feeder.

15 (e) Incombustible base requirement.--All switches, circuit
16 breakers and fuses shall have incombustible bases.

17 Section 312. Lightning protection.

18 If the surface transmission lines of low voltage or medium
19 voltage from the generating station are overhead, there shall be
20 lightning arrestors installed at the generating station. If the
21 distance from the generating station to the point where the line
22 enters the mine is more than 500 feet, an additional arrestor
23 shall be installed at that point.

24 Section 313. Underground power supply.

25 (a) Ground detectors.--All underground systems of
26 distribution that are completely insulated from earth shall be
27 equipped with properly installed ground detectors of suitable
28 design which will trip the circuit breaker when a ground fault
29 is detected. The ground detectors shall be maintained in working
30 condition.

1 (b) Protection of circuits leading underground.--

2 (1) In every completely insulated feeder circuit in
3 excess of 25 kilowatts capacity, leading underground and
4 operating at a potential not exceeding the limits of medium
5 voltage, there shall be provided above ground a circuit
6 breaker arranged to open simultaneously each ungrounded
7 conductor. In addition, a positive disconnect means shall be
8 installed outby the circuit breaker. Overload protection
9 shall be provided to open the circuit breaker in case of
10 overload on any conductor. Fuses may be substituted for
11 circuit breakers in circuits transmitting 25 kilowatts or
12 less. Each power circuit in excess of 50 kilowatts leading
13 underground shall be provided with a suitable ammeter.

14 (2) Every alternating current feeder circuit leading
15 underground and operating at a potential exceeding the limits
16 of medium voltage shall be provided above ground with a
17 suitable circuit breaker. The breaker shall be equipped with
18 automatic overload trip, arranged to open simultaneously each
19 ungrounded power-carrying conductor. Each circuit shall also
20 be provided with a suitable ammeter.

21 (c) Cables in shafts, slopes and boreholes.--

22 (1) All cables passing underground through inclines,
23 boreholes and shafts shall be installed in a manner that will
24 prevent undue strain in the sheath, insulation or conductors
25 and damage by chafing of cables against each other or against
26 the borehole casing or shaft. All ungrounded power conductors
27 in shafts, boreholes and inclines shall be covered with
28 suitable insulating materials and installed to provide a
29 minimum tensile factor of safety of five. Conductors shall be
30 securely fastened and properly supported out of contact with

1 combustible materials. When the weight, length and
2 construction of a cable are such that suspension from its
3 upper end only would subject the cable to possible damage, it
4 shall be supported at intervals necessary to prevent undue
5 strains in the sheath, insulation and conductors and to
6 provide a minimum tensile factor of safety of five. Adequate
7 protection shall be provided so that no damage can result
8 from water, electrolysis, moving cages, skips, ice, coal or
9 other falling or moving materials.

10 (2) Installation of direct-current and alternating-
11 current cables carrying in excess of 25 kilowatts in the same
12 borehole shall require approval of the department.

13 (d) High-voltage underground transmission systems.--High-
14 voltage conductors or cables leading underground and extending
15 underground shall be of the flame-resistant type with either a
16 rubber, plastic or armor sheath meeting the requirements of the
17 department for flame resistance. When the cable is fed by high-
18 voltage systems other than that described in this chapter, it
19 shall be either metallic armored, installed in rigid steel
20 conduit or buried one foot below combustible material. When
21 circuit and protective requirements are met, the cable
22 construction and method of installation may be that described in
23 this chapter. Cables shall be adequate for the intended current
24 and voltage. Splices made in cable shall provide continuity of
25 all components and shall be made in accordance with cable
26 manufacturers' recommendations. A competent individual
27 designated by the mine electrician shall supervise the making of
28 the splices.

29 (e) Braid covered cable.--

30 (1) No power wires or cables having what is commonly

1 termed as weatherproof insulation or insulation consisting of
2 braided covering, which is susceptible to moisture absorption
3 from the outer surface to the conductor, shall be installed
4 in a mine.

5 (2) All insulated power cables purchased for use in a
6 mine shall be protected by a flame-resistant jacket and
7 assigned an approval number unless either armored or
8 installed in rigid steel conduit, a metal enclosure or a
9 fireproof room.

10 (f) Ventilation.--

11 (1) Bare power conductors shall not be installed in an
12 air current that has passed through or by the first working
13 place in the air split.

14 (2) High-voltage transmission cable, high-voltage motors
15 and high-voltage transformers shall not be installed in any
16 air current that has passed through or by the first working
17 place in the air split.

18 (g) Underground cables in haulage roads.--

19 (1) Where the cables or feed wires, other than trolley
20 wires, in main haulage roads cannot be kept at least 12
21 inches from any part of a mine car or locomotive, they shall
22 be specially protected by proper guards.

23 (2) Cables and wires, except trailing or portable cables
24 or bare return cables, shall be installed on roofs, ribs,
25 walls or timbers by means of efficient insulators. All
26 electric cables constantly kept in rooms or pillars or other
27 work areas shall be carried on suitable supports to within 70
28 feet of the face of each work area. In no instance shall the
29 method of support damage the cable jacket or armor.

30 (3) When main or other roads are being repaired or

1 blasting is being carried on, suitable temporary protection
2 from damage shall be given to the cables.

3 (4) All other wires, except telephone, shot-firing and
4 signal wires, shall be on the same side of the road as the
5 trolley wire.

6 (5) Haulage block signal circuits and other control
7 circuits powered from the trolley shall be located on the
8 same side of the road as the trolley.

9 (h) Branch circuit protection.--When the potential of a
10 branch circuit exceeds the limit of medium voltage, it shall be
11 protected by a circuit breaker, except as otherwise permitted
12 under section 331(h). The circuit breaker shall be equipped with
13 an automatic overload trip arranged to open simultaneously each
14 ungrounded power carrying conductor. Provisions for positive
15 disconnection of the branch circuit shall be included.

16 (i) Underground transformer and substation rooms.--

17 (1) Any motor-generator, rectifier except those
18 described in subsection (r), rotary converter or oil-filled
19 transformer installed in a mine shall be enclosed in a
20 fireproof chamber of masonry or in an effectively grounded
21 approved steel structure. These buildings shall be provided
22 with automatically closing fire doors, but the automatic
23 features of fire doors may be omitted if a substation
24 attendant is employed. The openings of the doors shall be
25 safeguarded by grillwork so that only authorized individuals
26 may enter the room. No electrical equipment containing
27 inflammable material shall be placed within eight feet of a
28 door or opening in the underground building. All underground
29 substations containing rotary machinery shall have an
30 attendant constantly on duty while rotating machinery is in

1 operation, unless adequate control and protection of the
2 equipment is assured by the use of suitable automatic
3 devices. No transformer, circuit breaker, controller or other
4 device containing more than 20 gallons of inflammable liquid
5 shall be placed in any underground substation. A separate
6 split of air shall adequately ventilate the substation. No
7 substation shall be built in any mine until the location,
8 material, construction and method of ventilation for the
9 substation has received the approval of the department.

10 (2) Main and distribution switch and fuse boards shall
11 be made of incombustible, moisture-resistant, insulating
12 material and fixed in as dry a situation as practicable or
13 shall be of suitable metal construction, exposed portions of
14 which shall be effectively grounded. All switches, circuit
15 breakers, rheostats, fuses and instruments used in connection
16 with underground motor-generators, rotary-converters, high-
17 voltage motors, transformers, and low-voltage and medium-
18 voltage motors of more than 50 horsepower or 50 KVA capacity
19 shall be installed upon a suitable switchboard or in a metal-
20 clad switchgear structure. Similar equipment for low-voltage
21 and medium-voltage motors of 50 horsepower and less may be
22 separately installed if mounted upon insulating bases of
23 suitable material or effectively metal clad.

24 (j) Clearances.--

25 (1) In underground stations where switchboards are
26 installed, there shall be a passageway in front of the
27 switchboard not less than three feet in width, and, if there
28 are any high-voltage connections at the back of the
29 switchboard, any passageway behind the switchboard shall not
30 be less than three feet. The floor at the back of the

1 switchboard shall be properly floored and insulated with
2 nonconducting material, accessible from each end. In the case
3 of high-voltage, switchboards shall be kept locked, but the
4 lock shall allow the door being opened from the inside
5 without the use of a key.

6 (2) Where the supply is at a voltage exceeding the
7 limits of medium voltage, there shall be no live metal work
8 on the front of the main switchboard within seven feet of the
9 floor or platform, and the space provided under paragraph (1)
10 shall not be less than four feet. Insulating floors or mats
11 shall be provided for medium-voltage boards where live metal
12 work is on the front.

13 (k) Transformers.--The primary of each underground power
14 transformer shall be protected by a suitable circuit breaker
15 equipped with automatic overload trip arranged to open
16 simultaneously each ungrounded power conductor. The primary of a
17 transformer of less than 25 KVA capacity operated at a potential
18 lower than high voltage may be protected by fuses. When a
19 transformer is the only load on a branch circuit, the branch
20 circuit protection can be considered the transformer protection.

21 (l) Outgoing feeder protection.--Main circuits leaving
22 underground substations or transformer stations shall be
23 protected by circuit breakers.

24 (m) Grounding.--All metallic coverings, metal armoring of
25 cables and the frames and bedplates of generators, transformers
26 and motors shall be effectively grounded.

27 (n) Identification of hazard.--All high-voltage machines and
28 apparatus shall be marked to clearly indicate that they are
29 dangerous, by the use of the words "Danger, High Voltage."

30 (o) Protection of terminals.--All terminals on machines,

1 motors or equipment over medium-voltage underground shall be
2 protected with insulating covers or metal covers effectively
3 connected to the ground.

4 (p) Unauthorized individuals.--No individual, other than one
5 authorized by the mine foreman or mine electrician, shall enter
6 a station or transformer room or interfere with the working of
7 any connected apparatus.

8 (q) Fire protection.--Rock dust or fire extinguishers
9 suitable for extinguishing electrical fires shall be kept ready
10 for immediate use at electrical stations and transformer rooms.

11 (r) Fireproof rectifiers and transformers.--A portable
12 rectifier with a dry-type transformer, except those using pumped
13 tubes or glass bulb mercury arc tubes or a dry-type transformer
14 designed for underground use with adequate automatic electrical
15 protection and substantially of fireproof construction, fully
16 metal clad, which will not be in the same location in excess of
17 one year, may be installed in any intake air current, not beyond
18 the last open crosscut and not closer than 250 feet along the
19 air route to pillar workings. The location where the fireproof
20 rectifier or transformer is installed need not be made fireproof
21 with masonry or steel, but shall be equipped with doors,
22 grillwork or otherwise to prevent entry or access by
23 unauthorized individuals.

24 Section 314. Storage battery equipment.

25 (a) General rule.--All storage battery equipment and
26 charging stations shall be designed, operated and ventilated so
27 that gas from the batteries will be safely diluted. Storage
28 battery charging stations shall be on a separate split of air.

29 THE SPLIT OF AIR VENTILATING A STORAGE BATTERY CHARGING STATION <—
30 MAY BE VENTILATED TO A BELT ENTRY WHEN THE BELT ENTRY AIR IS NOT

1 USED TO VENTILATE WORKING FACES AND A CARBON MONOXIDE MONITORING
2 SYSTEM IS IN PLACE IN THE BELT ENTRY.

3 (b) Flammable materials.--The presence of flammable
4 materials is not permitted in any storage battery room or
5 charging station. Signs to this effect shall be posted in all
6 battery rooms or charging stations.

7 (c) Use in face areas.--Storage battery-operated equipment
8 may be used in face areas when all electrical parts that are
9 practicable to enclose are enclosed in explosion-proof casings
10 and the batteries are adequately ventilated.

11 Section 315. (Reserved).

12 Section 316. Electrical equipment.

13 (a) Voltage restriction.--Hand-held tools shall be
14 restricted to a maximum of 300 volts.

15 (b) Grounding.--The frame of all off-track equipment shall
16 be effectively grounded through a safety ground conductor in its
17 trailing cable.

18 (c) Hand-held tools.--Electric drills and other electrically
19 operated rotating tools intended to be hand held shall be
20 equipped with an integrally mounted electric switch designed to
21 break the circuit when the hand releases the switch.

22 (d) Trailing cables.--

23 (1) Trailing cables for equipment shall be safely and
24 efficiently insulated and constructed with an outer sheath or
25 jacket of flame-resistant material as approved by the
26 department.

27 (2) Cables for hand-held tools shall be especially
28 flexible, heavily insulated and effectively protected from
29 damage.

30 (3) ~~Each trailing cable on mobile equipment in use shall~~ <—

1 ~~be examined prior to operating the equipment~~ WITHIN TWO HOURS ←
2 ~~at the beginning of each shift by the machine operator for~~
3 ~~abrasions and other defects.~~ THE MACHINE OPERATOR SHALL ←
4 EXAMINE THE EXPOSED PORTION OF THE TRAILING CABLE FOR HIS
5 MACHINE AT THE BEGINNING OF EACH SHIFT FOR ABRASIONS AND
6 OTHER DEFECTS. THE REMAINDER OF THE TRAILING CABLE SHALL BE
7 EXAMINED WITHIN THE FIRST HOUR UPON THE ARRIVAL OF THE
8 PRODUCING SHIFT IN THE WORKING SECTION. The machine operator
9 shall also carefully observe the trailing cable while in use
10 and shall immediately report any defect to the mine official
11 in charge.

12 (4) In the event of the trailing cable in service
13 breaking down or becoming damaged in any way, or of it
14 inflicting a shock upon any individual, it shall be put out
15 of service at once. The faulty cable shall not be used again
16 until it has been repaired and tested by a properly
17 authorized individual.

18 (5) The trailing cable shall be divided at the machine
19 to which it is supplying power, but only for such length as
20 is necessary for making connection to the machine terminals.
21 The trailing cable, with its outer covering complete, shall
22 be securely clamped to the machine frame in a manner that
23 will protect the cable from injury and prevent any mechanical
24 strains on the single ends connected to the machine
25 terminals.

26 (6) No more than five temporary splices shall be made in
27 any trailing cable. After the fifth splice is made, the cable
28 shall be changed before the machine is operated on the
29 following shift. Trailing cables on equipment without a cable
30 reel shall have no temporary splices within 50 feet of the

1 machine before the machine is operated on the following
2 shift. Cable jacket repairs not involving conductors or
3 conductor insulation are not considered temporary splices.

4 (7) Trailing cables shall be hung or adequately
5 protected to prevent them from being run over and damaged by
6 mobile machinery.

7 (8) Trailing cables on off-track equipment shall contain
8 a safety ground conductor, which shall be solidly connected
9 to the machine frame. Cables found to contain defective
10 grounds shall be repaired before use or shall be replaced.
11 The safety ground conductor shall have a cross-sectional area
12 of at least 50% of that of a single power conductor unless
13 used with ground trip protective systems employing ground
14 fault current limiting devices, in which case a smaller
15 safety ground may be used.

16 (e) Motors.--In all mines electrical equipment in use inby
17 the last open crosscut shall have all current-carrying parts
18 completely enclosed in explosion-proof enclosures. This
19 requirement shall not include trailing cable, except where
20 terminated, and shall not include flexible cable as required
21 between motors, controllers, terminal boxes and other
22 auxiliaries. The enclosures shall not be opened except by an
23 authorized individual and then only when the power is switched
24 off. The power shall not be switched on while the enclosures are
25 open. Only permissible equipment is permitted inby the last
26 permanent stopping, except in rooms where open-type equipment
27 may be used only in intake travelways. This exception does not
28 include power distribution equipment.

29 (f) Safeguarding.--The individual in charge of mobile
30 electrical equipment shall not leave the equipment while it is

1 working and shall, before leaving the work area, see that power
2 is cut off the trailing cables.

3 (g) Explosion-tested compartments.--All explosion-tested
4 compartments and packing glands shall be maintained as approved
5 by the department.

6 (h) Detection of gas.--

7 (1) In working places, an approved hand-held gas
8 detection device shall be provided for use with each machine
9 when working. If methane gas is detected in an amount of 1%
10 or greater, the individual in charge shall immediately stop
11 the machine, cut off the current at the nearest switch and
12 report the matter to a mine official.

13 (2) When not in use, equipment shall be parked away from
14 the face. No electrically operated permissible face equipment
15 shall be taken in by the last open breakthrough until the
16 machine operator assures that an inspection for gas has been
17 made in the place where the machine is to be in operation. If
18 methane gas is detected in an amount of 1% or greater by a
19 gas detection device, the machine shall not be taken in. The
20 place shall be dangered off until the gas has been removed or
21 rendered harmless.

22 (3) No electrically operated equipment shall be in use
23 for a period longer than 20 minutes without a check for
24 methane gas as required under this subsection. If methane gas
25 is found at 1% or greater, the individual in charge shall
26 immediately stop the machine, cut off the current at the
27 nearest switch and report the matter to a mine official.

28 (4) The individual finding gas shall at once report the
29 fact to the mine foreman, assistant mine foreman or mine
30 examiner, and the machine shall not again be started in that

1 place until the mine examiner or an individual duly
2 authorized by the mine foreman has examined it and pronounced
3 it safe.

4 (5) If any electric sparking or arc is produced outside
5 a coal-cutting or other portable motor, or by the cables or
6 rails, the machine shall be stopped, disconnected from the
7 power supply and not be worked again until the defect is
8 repaired and the occurrence shall be reported to a mine
9 official.

10 (i) Methane monitors.--

11 (1) Methane monitors shall be installed on all face-
12 cutting machines and other mechanized equipment used to
13 extract or load coal in a mine. The sensing device for
14 methane monitors shall be installed at the return end of the
15 longwall face. An additional sensing device shall also be
16 installed on the longwall shearing machine, down wind and as
17 close to the cutting head as is practicable. The sensing
18 devices for methane on other types of machines shall be
19 installed as close to the working face as is practicable.
20 Methane monitors shall be maintained in permissible and
21 proper operating conditions and shall be calibrated with a
22 known air-methane mixture at least once every 31 days. To
23 assure that methane monitors are properly maintained and
24 calibrated, the operators shall do all of the following:

25 (i) Use individuals properly trained in the
26 maintenance, calibration and permissibility of methane
27 monitors to calibrate and maintain the devices.

28 (ii) Maintain a record of all calibration tests of
29 methane monitors. Records shall be maintained in a secure
30 book that is not susceptible to alteration or

1 electronically in a computer system so as to be secure
2 and not subject to alteration.

3 (iii) Retain the record of calibration tests for one
4 year from the date of the test. Records shall be retained
5 at a surface location at the mine and made available to
6 department representatives and representatives of the
7 mine workers.

8 (2) When the methane concentrations at any methane
9 monitor reach 1%, the monitor shall give a warning signal.
10 The warning signal of the methane monitor shall be visible to
11 the mining machine operator, who can de-energize electric
12 equipment or shut down diesel equipment on which the monitor
13 is mounted. A gas check shall be completed in accordance with
14 this act if at any time the methane concentrations at any
15 methane monitor reach 1.5%. This shall only apply if the
16 methane monitor maintains a warning signal for methane
17 concentrations of 1.5%.

18 (3) The methane monitor shall automatically de-energize
19 electric equipment or shut down diesel-powered equipment when
20 the methane accumulation reaches 2% or the methane monitor is
21 not operating properly.

22 Section 317. Inspection of equipment.

23 (a) Inspection required.--All electrical equipment shall be
24 inspected by the mine electrician or individual designated by
25 the mine electrician weekly and, where necessary, shall be
26 cleaned and repaired.

27 (b) Removal of coal dust.--All electric motors and cables in
28 mechanical sections shall have all excessive coal dust removed
29 from their exterior surfaces once each operating shift.

30 Section 318. Stationary motors.

1 Every stationary motor underground, together with its
2 starting equipment, shall be protected by a fuse or circuit-
3 breaking device on each ungrounded pole and by switches arranged
4 to entirely cut off the power from the motor. The devices shall
5 be installed in a convenient position near the motor, and every
6 stationary underground motor of 100 brake horsepower or over
7 shall be provided with a suitable meter to indicate the load on
8 the machine.

9 ~~Section 319. Permanent underground installation.~~ <—

10 ~~All electrical equipment not covered elsewhere under this~~
11 ~~act, and except room hoists and gathering pumps which will~~
12 ~~remain in the same location for a period of one year or more,~~
13 ~~shall be completely housed in an incombustible structure built~~
14 ~~of tile, brick, stone, concrete or grounded steel plates not~~
15 ~~less than one eighth inch in thickness, securely joined.~~

16 SECTION 319. UNDERGROUND ELECTRICAL INSTALLATIONS. <—

17 (A) HOUSING.--UNDERGROUND TRANSFORMER STATIONS, BATTERY
18 CHARGING STATIONS, SUBSTATIONS, RECTIFIERS AND WATER PUMPS SHALL
19 BE HOUSED IN NONCOMBUSTIBLE STRUCTURES OR AREAS OR BE EQUIPPED
20 WITH A FIRE SUPPRESSION SYSTEM.

21 (1) WHEN A NONCOMBUSTIBLE STRUCTURE OR AREA IS USED,
22 THESE INSTALLATIONS SHALL BE:

23 (I) VENTILATED WITH INTAKE AIR THAT IS COURSED INTO
24 A RETURN AIR COURSE OR TO THE SURFACE AND THAT IS NOT
25 USED TO VENTILATE WORKING PLACES;

26 (II) VENTILATED WITH INTAKE AIR THAT IS MONITORED
27 FOR CARBON MONOXIDE OR SMOKE BY AN ATMOSPHERIC MONITORING
28 SYSTEM INSTALLED AND OPERATED ACCORDING TO 30 CFR §
29 75.351 (RELATING TO ATMOSPHERIC MONITORING SYSTEMS).

30 MONITORING OF INTAKE AIR VENTILATING BATTERY CHARGING

1 STATIONS SHALL BE DONE WITH SENSORS NOT AFFECTED BY
2 HYDROGEN; OR

3 (III) VENTILATED WITH INTAKE AIR AND EQUIPPED WITH
4 SENSORS TO MONITOR FOR HEAT AND FOR CARBON MONOXIDE OR
5 SMOKE. MONITORING OF INTAKE AIR VENTILATING BATTERY
6 CHARGING STATIONS SHALL BE DONE WITH SENSORS NOT AFFECTED
7 BY HYDROGEN. THE SENSORS SHALL DE-ENERGIZE POWER TO THE
8 INSTALLATION, ACTIVATE A VISUAL AND AUDIBLE ALARM LOCATED
9 OUTSIDE OF AND ON THE INTAKE SIDE OF THE ENCLOSURE, AND
10 ACTIVATE DOORS THAT WILL AUTOMATICALLY CLOSE WHEN EITHER
11 OF THE FOLLOWING OCCURS:

12 (A) THE TEMPERATURE IN THE NONCOMBUSTIBLE
13 STRUCTURE REACHES 165 DEGREES FAHRENHEIT; OR

14 (B) THE CARBON MONOXIDE CONCENTRATION REACHES
15 TEN PARTS PER MILLION ABOVE THE AMBIENT LEVEL FOR THE
16 AREA, OR THE OPTICAL DENSITY OF SMOKE REACHES .022
17 PER METER. AT LEAST EVERY 31 DAYS, SENSORS INSTALLED
18 TO MONITOR FOR CARBON MONOXIDE SHALL BE CALIBRATED
19 WITH A KNOWN CONCENTRATION OF CARBON MONOXIDE AND AIR
20 SUFFICIENT TO ACTIVATE THE CLOSING DOOR, OR EACH
21 SMOKE SENSOR SHALL BE TESTED TO DETERMINE THAT IT
22 FUNCTIONS CORRECTLY.

23 (2) WHEN A FIRE SUPPRESSION SYSTEM IS USED, THESE
24 INSTALLATIONS SHALL BE:

25 (I) VENTILATED WITH INTAKE AIR THAT IS COURSED INTO
26 A RETURN AIR COURSE OR TO THE SURFACE AND THAT IS NOT
27 USED TO VENTILATE WORKING PLACES; OR

28 (II) VENTILATED WITH INTAKE AIR THAT IS MONITORED
29 FOR CARBON MONOXIDE OR SMOKE BY AN ATMOSPHERIC MONITORING
30 SYSTEM INSTALLED AND OPERATED ACCORDING TO 30 CFR §

1 75.351. MONITORING OF INTAKE AIR VENTILATING BATTERY
2 CHARGING STATIONS SHALL BE DONE WITH SENSORS NOT AFFECTED
3 BY HYDROGEN.

4 (B) APPLICABILITY.--THIS SECTION DOES NOT APPLY TO:

5 (1) RECTIFIERS AND POWER CENTERS WITH TRANSFORMERS THAT
6 ARE EITHER DRY-TYPE OR CONTAIN NONFLAMMABLE LIQUID, IF THEY
7 ARE LOCATED AT OR NEAR THE SECTION AND ARE MOVED AS THE
8 WORKING SECTION ADVANCES OR RETREATS.

9 (2) SUBMERSIBLE PUMPS.

10 (3) PERMISSIBLE PUMPS AND ASSOCIATED PERMISSIBLE
11 SWITCHGEAR.

12 (4) PUMPS LOCATED ON OR NEAR THE SECTION AND THAT ARE
13 MOVED AS THE WORKING SECTION ADVANCES OR RETREATS.

14 (5) SMALL PORTABLE PUMPS.

15 Section 320. Underground illumination.

16 (a) Sockets.--In all mines, the sockets of fixed electric
17 lamps shall be of so-called weatherproof type, the exterior of
18 which shall be entirely nonmetallic. Flexible lamp cord
19 connections are prohibited, except for portable lamps as
20 provided under subsection (c).

21 (b) Lamps.--Electric lamps shall be placed so they cannot
22 come in contact with combustible material.

23 (c) Portable electric lamps.--Portable electric lamps, other
24 than battery lamps, shall not be used in connection with the
25 repair and inspection of machines and equipment in face areas.
26 When used elsewhere, they shall be protected by a heavy wire
27 cage completely enclosing both lamp and socket and shall be
28 provided with a handle to which both cage and socket are firmly
29 attached and through which the lead-in wires are carried.

30 (d) Electric lamp enclosure.--Electric lamps, when used in

1 face areas of any mine, shall be installed in explosion-proof
2 enclosures.

3 (e) Electric lamp replacement.--Electric lamps shall be
4 replaced by a competent individual. In face areas, a qualified
5 individual shall be utilized after an examination for gas has
6 been made with an approved gas detection device.

7 (f) Underground photography.--Underground photography using
8 flash bulbs or other sources of artificial illumination shall be
9 prohibited unless immediately preceded by an examination for gas
10 by a mine foreman, assistant mine foreman or mine examiner and
11 the place found safe.

12 Section 321. Telephones and signaling.

13 (a) Telephone service.--Telephone service or equivalent two-
14 way communication facilities shall be provided in all mines
15 between the surface and each working section that is more than
16 1,500 feet from the main portal.

17 (b) Telephone lines.--Telephone lines shall be carried on
18 insulators, installed on the opposite side from power or trolley
19 wires and insulated adequately where they cross power or trolley
20 wires.

21 (c) Lightning arrestors.--Lightning arrestors shall be
22 provided at points where telephone circuits enter the mine.

23 (d) Telephone cables.--Telephone cables permanently
24 installed in power boreholes containing unarmored power cables
25 shall be either armored or protected at top and bottom by
26 insulating transformers.

27 (e) Precautions.--All proper precautions shall be taken to
28 prevent electric signal and telephone wires from coming into
29 contact with other electric conductors, whether insulated or
30 not.

1 (f) Standards generally.--Bells, wires, insulators, contact
2 makers and other apparatus used in connection with electric
3 signaling underground shall be of suitable design and of
4 substantial and reliable construction and erected in such a
5 manner as to reduce the liability of failures or false signals
6 to a minimum.

7 (g) Potential.--In the face areas of any mine, the potential
8 used for signal purposes shall not exceed 24 volts, and bare
9 wires shall not be used for signal circuits.

10 (h) Voltage on signal circuits.--The voltage on signal
11 circuits confined to intake air and using insulated conductors
12 may be greater than 24 volts, but shall not exceed 125 volts
13 average. This shall not apply to haulage block signal systems.
14 Section 322. Grounding.

15 (a) General rule.--In a direct-current electrical system,
16 grounding shall consist in so connecting any part of an
17 electrical system, including frames, to the earth that there
18 shall be no difference of potential between them.

19 (b) Negative side to be grounded.--Only the negative side of
20 the direct-current circuit shall be grounded.

21 (c) Rectifier diodes.--Rectifier diodes used at any
22 bituminous coal mine shall be connected to the supply circuit
23 through an isolating winding in order that isolation between
24 alternating current and direct-current systems is effective.

25 (d) Initial installation.--The initial installation of
26 rectifiers at any bituminous coal mine shall be approved by the
27 department before being energized.

28 Section 323. Voltage limitation.

29 In no case shall the potential used in the trolley system be
30 higher than 600 volts.

1 Section 324. Incoming feeder-disconnect switches.

2 Disconnecting switches shall be installed underground in all
3 main direct-current power circuits within 500 feet of the bottom
4 of shafts, boreholes or at other places where main power
5 circuits enter a mine.

6 Section 325. Bonding.

7 Where air or water pipes parallel the grounded return of
8 power circuits, the return shall be securely bonded to the pipes
9 at frequent intervals to eliminate the possibility of a
10 difference of voltage between rails and pipes and to prevent
11 electrolysis of the pipes. The rail return shall be of
12 sufficient capacity for the current used, independent of the
13 capacity of the pipes. On main haulage roads, both rails shall
14 be bonded, except welded track, and cross bonds shall be placed
15 at points not to exceed 200 feet apart. On secondary haulage
16 roads, one rail shall be bonded continuously.

17 Section 326. Trolley installation.

18 (a) Trolley wires and feeder lines.--All trolley wires and
19 feeder lines installed on underground haulage roads shall be
20 placed as far to one side of the passageway as is practicable,
21 but not less than six inches outside of line of rail, and
22 securely supported upon hangers which shall not be more than 24
23 feet apart and efficiently insulated.

24 (b) Prohibition.--In all mines, trolley and feeder wires
25 shall not extend beyond the last open crosscut and shall be kept
26 at least 150 feet from open pillar workings.

27 (c) Switches or circuit breakers.--All branch trolley lines
28 shall be fitted with either a trolley switch, circuit breaker or
29 section insulator and line switch or some other device that will
30 allow the current to be shut off from the branch headings.

1 Switches or circuit breakers shall be provided on haulage roads
2 to de-energize all trolley and feeder lines at intervals not to
3 exceed 2,000 feet.

4 Section 327. Connections to trolley.

5 (a) Permanent connections.--All permanent connections to
6 trolley feeder circuits shall be made with suitable mechanical
7 connectors. No temporary or permanent connection shall be
8 wrapped or tied.

9 (b) Temporary connections.--Temporary connections for
10 portable equipment may be made through fused trolley taps.

11 (c) Safety ground and negative connections.--Safety ground
12 and negative connections for temporary or permanent
13 installations shall be made at two separate points, at least six
14 inches apart, and shall be made directly to the track, a bond or
15 the system ground.

16 Section 328. Guarding.

17 At all landings and partings or other places where
18 individuals are required to regularly work or pass under trolley
19 or other bare power wires, which are placed less than six and
20 one-half feet above top of rail, a suitable protection shall be
21 provided. This protection shall consist of placing boards along
22 the wire, which boards shall not be more than five inches apart
23 nor less than two inches below the lowest point of the wire. The
24 distance between boards on curves may exceed five inches, but
25 shall not exceed eight inches. This does not prohibit the use of
26 other approved devices or methods furnishing equal or better
27 protection.

28 Section 329. Locomotives.

29 (a) Electric haulage.--Electric haulage by trolley
30 locomotive is not permitted except on intake air.

1 (b) Certain operation prohibited.--It shall be unlawful to
2 run or operate a locomotive, fed directly or indirectly from a
3 trolley wire, by the open entrances to worked out places wherein
4 the pillars have been drawn or places in which the pillars have
5 not been drawn but in places where the roof has collapsed.

6 (c) Certain use proscribed.--No open-type electric
7 locomotive or open-type electric machine of whatsoever type
8 shall be taken into a working place. Main return airways or
9 passageways shall not be used as haulageways for electric
10 locomotives operated from a trolley wire.

11 Section 330. Outdoor substation.

12 The outdoor substation shall be built in accordance with
13 current Institute of Electrical and Electronics Engineers'
14 standards and department equipment performance specification and
15 shall include:

16 (1) Protective fence or enclosure.

17 (2) Primary or incoming line lightning arrestors.

18 (3) Positive disconnecting means on the incoming or
19 primary line with a circuit breaker or fuses to interrupt
20 safely any current, normal or abnormal, which might be
21 encountered.

22 (4) Transformer bank to convert the incoming or primary
23 voltage to the transmission voltage. The use of auto-
24 transformers for this purpose is prohibited. Secondary or
25 underground transmission voltage shall not exceed 15,000
26 volts, nominal, phase to phase. The transformer may be
27 connected delta-wye, wye-delta or delta-delta. Wye-wye
28 connections shall not be used because of voltage instability
29 under some conditions of load. In the event that the
30 secondary winding is delta-connected, the neutral necessary

1 for the four-wire transmission circuit shall be derived by
2 the use of a three-phase zig-zag or grounding transformer.
3 Where grounding transformers are used, they shall be of
4 sufficient capacity to carry maximum ground fault current
5 continuously. Should the substation primary or supply voltage
6 equal the mine transmission voltage, the main transformer
7 bank may be omitted and the zig-zag transformer used to
8 derive a system neutral if one is not otherwise available.

9 (5) Secondary lightning arrestors.

10 (6) Ground fault-current limiting resistor capable of
11 continuously limiting ground fault current to 25 amperes or
12 less. The resistor shall be adequately insulated and shall be
13 protected by a grounded fence or screen unless mounted eight
14 feet or more above ground.

15 (7) Secondary or mine feeder circuit breaker with
16 interrupting capacity adequate for any possible condition of
17 fault and no less than the short circuit capacity of the
18 system supplying power to the breaker. Positive disconnect
19 means shall be provided on the input and output side of the
20 breaker. Use of automatic reclosing circuit breakers is
21 prohibited. Breaker automatic tripping shall be through
22 protective relays and shall provide, as a minimum, tripping
23 by undervoltage, instantaneous and inverse time limit phase
24 overcurrent, ground fault current not exceeding 15 amperes
25 and ground-continuity check not exceeding seven amperes. The
26 ground-continuity check circuit shall continuously monitor
27 the integrity of the neutral circuit leading underground and
28 shall cause the breaker to open when either the ground or
29 pilot check wire is broken. An ammeter capable of reading
30 current in each phase and a voltmeter capable of reading

1 phase-to-phase voltage shall be provided at the circuit
2 breaker.

3 (8) Surge protection or station ground bed to which
4 shall be connected all lightning arrestor grounds, substation
5 equipment frame grounds, fence, if metallic, and substation
6 structure, if metallic. There shall be no direct connection
7 between this ground bed and either the grounded side of the
8 mine direct-current system or the neutral ground bed
9 described below.

10 (9) Neutral or primary ground bed located at least 25
11 feet away from the station ground at its closest point and to
12 which shall be connected only the inby or load end of the
13 neutral current limiting resistor. To prevent current
14 transformer core saturation by stray direct current return
15 currents, or neutral conductor damage, there shall be no
16 direct or metallic connection between any point of the high-
17 voltage alternating current neutral circuit and the mine
18 direct-current ground.

19 (10) Ground bed resistance shall be measured at least
20 every six months and appropriate action taken to assure the
21 maintenance of four ohms or less of ground bed resistance. A
22 record of these resistance measurements shall be kept in a
23 book provided for that purpose.

24 Section 331. High-voltage underground transmission system.

25 (a) Underground.--High-voltage cables leading underground
26 and extending underground shall be of the multiple conductor
27 flame-resistant type with a rubber, plastic or armor sheath
28 meeting the requirements of the department for flame resistance.
29 They shall be equipped with metallic shields around each power
30 conductor. One or more ground conductors shall be provided of a

1 total size either:

2 (1) not less than one-half the power conductor size; or

3 (2) capable of carrying two times the maximum ground
4 fault current.

5 There shall also be provided an insulated conductor not smaller
6 than No. 10 AWG for the ground-continuity check circuit. Cables
7 shall be adequate for the intended current and voltage. Splices
8 made in the cable shall provide continuity of all components and
9 shall be made in accordance with the cable manufacturers'
10 recommendations. A competent individual designated by the mine
11 electrician shall supervise the making of splices.

12 (b) Subject to flexing.--High-voltage cables subject to
13 repeated flexing shall be similar in construction to type SH-D
14 in accordance with Insulated Power Cable Engineers Association
15 standard S-19-81.

16 (c) Couplers.--If couplers are used, they shall be of the
17 three-phase type with a full metallic shell and shall be
18 adequate for the voltage and current expected. All exposed metal
19 on the couplers shall be grounded to the ground conductor in the
20 cable. The coupler shall be constructed so that the ground
21 continuity conductor shall be broken first and the ground
22 conductor shall be broken last when the coupler is being
23 uncoupled.

24 (d) Equipment passing over or under cable.--At locations
25 where cables cross haulageways or travelways or where equipment
26 must pass over or under the cable, the cables shall be either
27 installed in a trench in the roof, protected by some mechanical
28 means or buried at least 12 inches below combustible material
29 and adequately protected from crushing by the weight of
30 equipment passing over it.

1 (e) Location of installation.--High-voltage cables shall be
2 installed only in intake airways. They may be installed on
3 intake haulageways only with the approval of the department. The
4 cable may be installed by hanging on suitable hooks or clamps,
5 supported by a suitable messenger cable, burying or installing
6 in metal conduit. When suspended, the distance between supports
7 shall not exceed 20 feet, and they shall be so placed that they
8 do not damage the cable jacket. When hung in a haulage entry
9 containing a trolley wire, the cable shall be installed at least
10 12 inches from the trolley wire or feeder wires and away from
11 the track.

12 (f) Excess cable.--Any excess cable which is connected and
13 supplying a load shall be coiled, stored on a reel or otherwise
14 stored at a place near the load where it can be protected by
15 danging off the storage area. The cable shall not exceed 1,000
16 feet in length.

17 (g) Frames and enclosures.--Frames and enclosures of high-
18 voltage switch units, transformers, metallic cable couplers and
19 splice boxes shall be grounded to the common or primary ground
20 for the system in the high-voltage cable.

21 (h) Taps or branch circuits.--Taps or branch circuits from
22 the high-voltage feeder shall be made through circuit breakers
23 or suitable load break switches.

24 (i) Nonload breaking disconnect switches.--When nonload
25 breaking disconnect switches are used for sectionalizing high-
26 voltage circuits, they shall be fully metal clad, equipped with
27 a door interlock to break the ground-continuity check circuit,
28 thus tripping the feeding breaker when the door is open, and a
29 voltmeter or indicating lights to verify that the circuit is
30 deenergized before the disconnected switches are opened.

1 (j) Applicability.--For the purpose of interpretation and
2 compliance with subsection (h) and section 313(h), the following
3 apply:

4 (1) A branch circuit is a subportion of the high-voltage
5 system, serving one or more loads. The branch circuit begins
6 at the junction or splitting of the high-voltage system. The
7 junction consists of the following distinct elements:

8 (i) Input feeder, which delivers power from the
9 source.

10 (ii) Output feeder, which may extend the feeder to
11 other parts of the high-voltage system.

12 (iii) Branch circuit.

13 The output feeder is not considered as a branch circuit and
14 is not required to have electrical protection at the
15 junction, but receives electrical protection either at the
16 source substation or at some place between the source
17 substation and the junction. The branch circuit is required
18 to have protection at the junction.

19 (2) A tap supplies power to the high-voltage loads
20 located entirely within the enclosure where the connection is
21 made. Where no splitting of the feeder cable occurs, neither
22 a tap nor branch is created.

23 (3) A suitable load-break switch, which may be used in
24 lieu of a circuit breaker, is a gang-operated switch with a
25 voltage rating not less than the system voltage, capable of
26 interrupting a current equal to its continuous full load
27 rating and to be used in conjunction with fuses to provide
28 overload and short circuit protection for the load being
29 served.

30 Section 332. Load center.

1 Transmission voltage shall be reduced to machine utilization
2 voltage by a portable transformer or load center of adequate
3 capacity for the equipment powered by it. The transformer shall
4 be of the dry type, ventilated, nonventilated or sealed,
5 substantially constructed and completely enclosed in a metal
6 case. The metal enclosure shall be connected to the high-voltage
7 system ground conductor in the high-voltage cable. Complete load
8 center construction shall render it essentially fireproof. In
9 addition to these requirements, the following shall be observed:

10 (1) Connection of the high-voltage cable to the load
11 center shall be made through a cable coupler of the type
12 described in section 331(c).

13 (2) The load center shall be equipped with a positive
14 disconnect means on the incoming or high-voltage circuit.
15 This may consist of a circuit breaker, load-break switch,
16 disconnect switch or other device. The following apply:

17 (i) If a circuit breaker is used for this purpose,
18 it shall be equipped with instantaneous and inverse time
19 limit phase overcurrent and undervoltage relaying
20 protection.

21 (ii) If a device other than a circuit breaker is
22 used, it shall be so arranged that it cannot be operated
23 until the ground continuity check circuit in the high-
24 voltage cable has opened causing the nearest feeding
25 circuit breaker to trip.

26 (3) The restriction of section 330(4) pertaining to
27 transformer connections and use of zig-zag grounding
28 transformers also apply to the load center.

29 (4) The transformer secondary neutral, direct or
30 derived, shall be connected to machine trailing cable safety

1 ground conductors through a ground current limiting resistor
2 capable of limiting ground fault current to 25 amperes or
3 less. The inby side of the resistor shall be grounded to the
4 load center frame if no DC equipment powered from a common
5 mine DC system can contact the frames of AC equipment powered
6 by this load center. In the event there is a possibility of
7 frame contact between AC equipment and DC equipment supplied
8 from a common DC mine system, the inby side of the resistor
9 may be insulated from the load center frame and shall be
10 solidly connected to the DC ground system.

11 (5) The load center shall be equipped with a main
12 secondary breaker of adequate interrupting capacity with
13 tripping devices which shall feed individual machine breakers
14 located either in the load center or external to it in a
15 separate distribution center. External utilization voltage
16 connections shall be made through receptacles arranged so
17 that they cannot be uncoupled under load.

18 (6) Load centers shall be located on intake air only.
19 Load centers shall not be located beyond the last open
20 crosscut or located closer than 250 feet along the air route
21 to pillar workings.

22 Section 333. Distribution centers.

23 (a) General rule.--Distribution centers may be used to
24 distribute utilization power to portable equipment. The
25 distribution center may be connected to the load center through
26 one or more cables or conductors protected by flame-resistant
27 jackets with combined capacity sufficient to carry the maximum
28 loads that may be encountered. The distribution center shall
29 contain breakers adequate to interrupt any fault current that
30 might occur, which shall feed each unit of equipment that is

1 connected to the distribution center. Each breaker shall be
2 equipped with tripping devices that will function, on overload,
3 phase fault and ground fault. Distribution centers shall be
4 located on intake air only, and shall not be located beyond the
5 last open crosscut or closer than 150 feet from pillar workings
6 unless the distribution center shall have an approved explosion-
7 proof enclosure.

8 (b) Cables.--Utilization voltage cables shall be fitted with
9 plug couplers and provision made so that cables cannot be
10 uncoupled under load. All plugs and sockets shall be
11 substantially constructed, and any exposed metal portions shall
12 be grounded. Couplers shall be constructed so that the ground
13 conductor connection is broken last during uncoupling.

14 (c) Ground conductors.--Utilization voltage conductors,
15 cables or conductor groups shall contain one or more ground
16 conductors which when combined shall be able to carry safely and
17 continuously at least twice the maximum ground fault current.

18 (d) Option.--A combined alternating and direct-current
19 distribution or load center complete within a substantially
20 fireproof metal enclosure, with a dry type transformer and solid
21 state rectifier and adequate automatic electrical protection,
22 may be used to distribute alternating and direct current
23 utilization power. The power supply to this unit may be low,
24 medium or high voltage. When high voltage is utilized, the
25 requirements of section 332 shall apply. When medium or low
26 voltage is utilized, this section shall apply. However, when an
27 external DC distribution device is employed, the rectifier
28 output may be taken through a main DC circuit breaker to that
29 device without the use of a plug and receptacle system.

30 Section 334. Mandatory safety components of electrical

1 equipment.

2 (a) Requirement.--Low-voltage, medium-voltage and high-
3 voltage resistance ground systems shall have ground wire
4 monitors to continuously monitor the continuity of the grounding
5 circuits to the equipment affected, except for:

6 (1) Low-voltage and medium-voltage circuits supplying
7 power to longwall illumination systems.

8 (2) Low-voltage and medium-voltage stationary equipment
9 installed in accordance with all of the following:

10 (i) The equipment is permanently installed at a
11 fixed location.

12 (ii) All load components are securely attached to a
13 common metallic frame or structure.

14 (iii) Each component of the equipment is grounded by
15 two independent equipment safety grounding, each sized
16 appropriately.

17 (iv) At least one of the equipment safety ground
18 conductors to each component is visible for its entire
19 length. High-voltage resistance grounded systems shall
20 have ground wire monitors to continuously monitor the
21 continuity of the grounding circuits. All ground wire
22 monitors shall be designed and constructed to be
23 failsafe.

24 (b) Study.--The mining industry shall initiate a study to
25 enhance the safety of underground direct-current machine cables.
26 The program shall include an evaluation of ground wire monitors
27 for use on all direct-current equipment. The program shall
28 include laboratory and underground testing. The test results
29 shall be documented and presented to the Board of Coal Mine
30 Safety no later than 365 days after the effective date of this

1 act for action by the board.

2 (c) Additional study.--The mining industry shall initiate a
3 study to enhance the safety of underground cables. The program
4 shall include an evaluation of metallic shielded cable,
5 nonmetallic shielded cable and more sensitive ground fault
6 limiting and detection. The program shall include laboratory and
7 underground testing. The results shall be documented and
8 presented to the Board of Coal Mine Safety no later than 365
9 days after the effective date of this act for action by the
10 board.

11 (d) Plugs.--If plugs are used on any cable in a mine, the
12 plugs must be interlocked.

13 Section 335. High-voltage longwalls.

14 Sections 336 through 344 are electrical safety standards that
15 apply to high-voltage longwall circuits and equipment. All other
16 standards established under this act also apply to longwall
17 circuits and equipment when appropriate. The department shall
18 consider existing Federal interpretations of comparable
19 standards when implementing and enforcing these requirements.

20 Section 336. Longwall electrical protection.

21 (a) High-voltage circuits.--High-voltage circuits must be
22 protected against short circuits, overloads, ground faults and
23 undervoltages by circuit-interrupting devices of adequate
24 interrupting capacity as follows:

25 (1) Current settings of short-circuit protective devices
26 must not exceed the setting specified in approval
27 documentation or 75% of the minimum available phase-to-phase
28 short-circuit current, whichever is less.

29 (2) Time-delay settings of short-circuit protective
30 devices used to protect any cable extending from the section

1 power center to a motor-starter enclosure must not exceed the
2 settings specified in approval documentation or one-quarter
3 second, whichever is less. Time-delay settings of short-
4 circuit protective devices used to protect motor and shearer
5 circuits must not exceed the settings specified in approval
6 documentation or three cycles, whichever is less.

7 (3) Ground-fault currents must be limited by a neutral
8 grounding resistor to not more than:

9 (i) six and one-half amperes when the nominal
10 voltage of the power circuit is 2,400 volts or less; or

11 (ii) three and three-quarters of an ampere when the
12 nominal voltage of the power circuit exceeds 2,400 volts.

13 (4) High-voltage circuits extending from the section
14 power center must be provided with all of the following:

15 (i) Ground-fault protection set to cause de-
16 energization at not more than 40% of the current rating
17 of the neutral grounding resistor.

18 (ii) A backup ground-fault detection device to cause
19 de-energization when a ground fault occurs with the
20 neutral grounding resistor open.

21 (iii) Thermal protection for the grounding resistor
22 that will de-energize the longwall power center if the
23 resistor is subjected to a sustained ground fault. The
24 thermal protection must operate at either 50% of the
25 maximum temperature rise of the grounding resistor or 150
26 Centigrade or 302 Fahrenheit, whichever is less, and must
27 open the ground-wire monitor circuit for the high-voltage
28 circuit supplying the section power center. The thermal
29 protection must not be dependent upon control power and
30 may consist of a current transformer and overcurrent

1 relay.

2 (5) High-voltage motor and shearer circuits must be
3 provided with instantaneous ground-fault protection set at
4 not more than 0.125 of an ampere.

5 (6) Time-delay settings of ground-fault protective
6 devices used to provide coordination with the instantaneous
7 ground-fault protection of motor and shearer circuits shall
8 not exceed one-quarter second.

9 (7) Undervoltage protection shall be provided by a
10 device which operates on low voltage to cause and maintain
11 the interruption of power to a circuit to prevent automatic
12 restarting of the equipment.

13 (b) Current transformers.--Current transformers used for the
14 ground-fault protection specified in subsection (a)(1), (4)(i)
15 and (5) must be single window type and must be installed to
16 encircle all three-phase conductors. Equipment safety grounding
17 conductors must not pass through or be connected in series with
18 ground-fault current transformers.

19 (c) Test circuit.--Each ground-fault current device
20 specified in subsection (a)(4)(i) and (5) must be provided with
21 a test circuit that will inject a primary current of 50% or less
22 of the current rating of the grounding resistor through the
23 current transformer and cause each corresponding circuit-
24 interrupting device to open.

25 (d) Prohibition.--Circuit-interrupting devices shall not
26 reclose automatically.

27 (e) Multiple cables.--Where two or more high-voltage cables
28 are used to supply power to a common bus in a high-voltage
29 enclosure, each cable must be provided with ground wire
30 monitoring. The ground wire monitoring circuits must cause de-

1 energization of each cable when either the ground monitor or
2 grounding conductor of any cable becomes severed or open. On or
3 after the effective date of this section, parallel-connected
4 cables on newly installed longwalls must be protected as
5 follows:

6 (1) when one circuit-interrupting device is used to
7 protect parallel-connected cables, the circuit-interrupting
8 device must be electrically interlocked with the cables so
9 that the device will open when any cable is disconnected; or

10 (2) when two or more parallel circuit-interrupting
11 devices are used to protect parallel-connected cables, the
12 circuit-interrupting devices must be mechanically and
13 electrically interlocked. Mechanical interlocking shall cause
14 all devices to open simultaneously and electrical
15 interlocking shall cause all devices to open when any cable
16 is disconnected.

17 Section 337. Longwall disconnect switches.

18 (a) Section power center.--The section power center must be
19 equipped with a main disconnecting device installed to de-
20 energize all cables extending to longwall equipment when the
21 device is in the open position.

22 (b) Maintenance.--Disconnecting devices for motor-starter
23 enclosures must be maintained in accordance with the
24 department's approval. The compartment for the disconnect device
25 must be provided with a caution label to warn miners against
26 entering the compartment before de-energizing the incoming high-
27 voltage circuits to the compartment.

28 (c) Rating.--Disconnecting devices must be rated for the
29 maximum phase-to-phase voltage of the circuit in which they are
30 installed and for the full load current of the circuit that is

1 supplied power through the device.

2 (d) Installation.--Each disconnecting device must be
3 designed and installed so that:

4 (1) Visual observation determines that the contacts are
5 open without removing any cover.

6 (2) All load power conductors can be grounded when the
7 device is in the open position.

8 (3) The device can be locked in the open position.

9 (e) Capability.--Disconnecting devices, except those
10 installed in explosion-proof enclosures, shall be capable of
11 interrupting the full load current of the circuit or designed
12 and installed to cause the current to be interrupted
13 automatically prior to the opening of the contacts of the
14 device. Disconnecting devices installed in explosion-proof
15 enclosures shall be maintained in accordance with the
16 department's approval.

17 Section 338. Guarding of longwall cables.

18 (a) High-voltage cables.--High-voltage cables shall be
19 guarded at the following locations:

20 (1) Where individuals regularly work or travel over or
21 under the cables.

22 (2) Where the cables leave cable handling or support
23 systems to extend to electric components.

24 (b) Intent and design of guarding.--Guarding shall minimize
25 the possibility of miners contacting the cables and protect the
26 cables from damage. The guarding shall be made of grounded metal
27 or nonconductive flame-resistant material.

28 Section 339. Longwall cable-handling and support systems.

29 Longwall mining equipment shall be provided with cable-
30 handling and support systems that are constructed, installed and

1 maintained to minimize the possibility of miners contacting the
2 cables and to protect the high-voltage cables from damage.

3 Section 340. Use of longwall insulated cable handling
4 equipment.

5 (a) General rule.--Energized high-voltage cables shall not
6 be handled except when motor or shearer cables need to be
7 trained. When cables need to be trained, high-voltage insulated
8 gloves, mitts, hooks, tongs, slings, aprons or other personal
9 protective equipment capable of providing protection against
10 shock hazard shall be used to prevent direct contact with the
11 cable.

12 (b) Standards, examinations, testing and replacement.--High-
13 voltage insulated gloves, sleeves and other insulated personal
14 protective equipment shall:

15 (1) have a voltage rating of at least Class 1, 7,500
16 volts, that meets or exceeds ASTM F496-97, Standard
17 Specification for In-Service Care of Insulating Gloves and
18 Sleeves (1997);

19 (2) be examined before each use for visible signs of
20 damage;

21 (3) be removed from the underground area of the mine or
22 destroyed when damaged or defective; and

23 (4) be electrically tested every six months.

24 Section 341. Maintenance.

25 Compartment separation and cover interlock switches for
26 motor-starter enclosures shall be maintained in accordance with
27 section 342.

28 Section 342. High-voltage longwall mining systems.

29 (a) General rule.--In each high-voltage motor-starter
30 enclosure, with the exception of a controller on a high-voltage

1 shearer, the disconnect device compartment,
2 control/communications compartment and motor contactor
3 compartment shall be separated by barriers or partitions to
4 prevent exposure of personnel to energized high-voltage
5 conductors or parts. Barriers or partitions shall be constructed
6 of grounded metal or nonconductive insulating board.

7 (a.1) High-voltage shearers.--In each motor-starter
8 enclosure on a high-voltage shearer, the high-voltage components
9 shall be separated from lower voltage components by barriers or
10 partitions to prevent exposure of personnel to energized high-
11 voltage conductors or parts. Barriers or partitions shall be
12 constructed of grounded metal or nonconductive insulating board.

13 (b) Interlock switches.--Each cover of a compartment in the
14 high-voltage motor-starter enclosure containing high-voltage
15 components shall be equipped with at least two interlock
16 switches arranged to automatically de-energize the high-voltage
17 components within that compartment when the cover is removed.

18 (c) Circuit-interrupting devices.--Circuit-interrupting
19 devices shall be designed and installed to prevent automatic
20 reclosure.

21 (d) Transformers.--Transformers with high-voltage primary
22 windings that supply control voltages shall incorporate grounded
23 electrostatic (Faraday) shielding between the primary and
24 secondary windings. The shielding shall be connected to the
25 equipment ground by a minimum No. 12 AWG grounding conductor.
26 The secondary nominal voltage shall not exceed 120 volts, line
27 to line.

28 (e) Test circuits.--Test circuits shall be provided for
29 checking the condition of ground wire monitors and ground-fault
30 protection without exposing personnel to energized circuits.

1 Each ground-test circuit shall inject a primary current of 50%
2 or less of the current rating of the grounding resistor through
3 the current transformer and cause each corresponding circuit-
4 interrupting device to open.

5 (f) Disconnect devices.--Each motor-starter enclosure, with
6 the exception of a controller on a high-voltage shearer, shall
7 be equipped with a disconnect device installed to de-energize
8 all high-voltage power conductors extending from the enclosure
9 when the device is in the open position.

10 (1) When multiple disconnect devices located in the same
11 enclosure are used to satisfy the requirement of this
12 subsection, they shall be mechanically connected to provide
13 simultaneous operation by one handle.

14 (2) The disconnect device shall be rated for the maximum
15 phase-to-phase voltage and the full-load current of the
16 circuit in which it is located and installed so that:

17 (i) visual observation determines that the contacts
18 are open without removing any cover;

19 (ii) the load-side power conductors are grounded
20 when the device is in the open position;

21 (iii) the device can be locked in the open position;

22 (iv) when located in an explosion-proof enclosure,
23 the device shall be designed and installed to cause the
24 current to be interrupted automatically prior to the
25 opening of the contacts; and

26 (v) when located in a nonexplosion-proof enclosure,
27 the device shall be designed and installed to cause the
28 current to be interrupted automatically prior to the
29 opening of the contacts, or the device shall be capable
30 of interrupting the full-load current of the circuit.

1 (g) Starters to be interlocked.--Control circuits for the
2 high-voltage motor starters shall be interlocked with the
3 disconnect device so that:

4 (1) The control circuit can be operated with an
5 auxiliary switch in the test position only when the
6 disconnect device is in the open and grounded position.

7 (2) The control circuit can be operated with the
8 auxiliary switch in the normal position only when the
9 disconnect switch is in the closed position.

10 (h) Determination of minimum available fault current.--A
11 study to determine the minimum available fault current shall be
12 submitted to the department to ensure adequate protection for
13 the length and conductor size of the longwall motor, shearer and
14 trailing cables.

15 (i) Shielded construction of certain cables.--Longwall motor
16 and shearer cables with nominal voltages greater than 660 volts
17 shall be made of a shielded construction with a grounded
18 metallic shield around each power conductor.

19 (j) Instantaneous ground fault protection.--High-voltage
20 motor and shearer circuits shall be provided with instantaneous
21 ground fault protection of not more than 0.125 of an ampere.
22 Current transformers used for this protection shall be of the
23 single window type and shall be installed to encircle all three-
24 phase conductors.

25 Section 343. Longwall electrical work.

26 (a) Qualified workers.--Electrical work on all circuits and
27 equipment associated with high-voltage longwalls shall be
28 performed by MSHA-qualified persons.

29 (b) Procedures for work on circuits and equipment.--Except
30 for troubleshooting and testing of energized circuits and

1 equipment as provided under subsection (d), prior to performing
2 electrical work a qualified individual shall do the following:

3 (1) De-energize the circuit or equipment with a circuit-
4 interrupting device.

5 (2) Open the circuit-disconnecting device. On high-
6 voltage circuits, ground the power conductors until work on
7 the circuit is completed.

8 (3) Lock out the disconnecting device with a padlock.
9 When more than one qualified individual is performing work,
10 each individual shall install an individual padlock.

11 (4) Tag the disconnecting device to identify each
12 individual working and the circuit or equipment on which work
13 is being performed.

14 (c) Restrictions relating to low-voltage, medium-voltage or
15 high-voltage distribution circuits or equipment.--No electrical
16 work shall be performed on low-voltage, medium-voltage or high-
17 voltage distribution circuits or equipment, except by a
18 qualified individual or an individual trained to perform
19 electrical work and to maintain electrical equipment under the
20 direct supervision of a qualified individual. Disconnecting
21 devices shall be locked out and suitably tagged by the
22 individuals who perform the work, except that in cases where
23 locking out is not possible, the devices shall be opened and
24 suitably tagged by individuals performing the work. Locks or
25 tags shall be removed only by the individuals who installed them
26 or, if such individuals are unavailable, by individuals
27 authorized by the operator or his agent.

28 (d) Troubleshooting and testing of energized circuits.--
29 Troubleshooting and testing of energized circuits must be
30 performed only:

1 (1) On low-voltage and medium-voltage circuits.

2 (2) When the purpose of troubleshooting and testing is
3 to determine voltages and currents.

4 (3) By an individual qualified to perform electrical
5 work and who wears protective gloves. Rubber-insulating
6 gloves shall be rated at least for the nominal voltage of the
7 circuit when the voltage of the circuit exceeds 120 volts
8 nominal and is not intrinsically safe.

9 (e) Troubleshooting and testing of multiple voltage
10 circuits.--Before troubleshooting and testing a low-voltage or
11 medium-voltage circuit contained in a compartment with a high-
12 voltage circuit, the high-voltage circuit must be de-energized,
13 disconnected, grounded, locked out and tagged in accordance with
14 subsection (b).

15 (f) Conveyor belt structures.--Prior to the installation or
16 removal of a conveyor belt structure, high-voltage cables
17 extending from the section power center to the longwall
18 equipment and located in the belt entries shall be:

19 (1) deenergized; or

20 (2) guarded in accordance with section 338, at the
21 location where the belt structure is being installed or
22 removed.

23 Section 344. Testing, examination and maintenance of longwall
24 equipment.

25 (a) Equipment subject to seven-day inspection schedule.--At
26 least once every seven days, a MSHA-qualified individual shall
27 test and examine each unit of high-voltage longwall equipment
28 and circuits to determine that electrical protection, equipment
29 grounding, permissibility cable insulation and control devices
30 are being properly maintained to prevent fire, electrical shock,

1 ignition or operational hazards from existing on the equipment.
2 Tests shall include activating the ground-fault test circuit.

3 (b) Equipment subject to 30-day inspection schedule.--Each
4 ground-wire monitor and associated circuits shall be examined
5 and tested at least once every 30 days to verify proper
6 operation and to verify that it will cause the corresponding
7 circuit-interrupting device to open.

8 (c) Removal or repair of equipment.--When examinations or
9 tests of equipment reveal a fire, electrical shock, ignition or
10 operational hazard, the equipment must be removed from service
11 immediately or repaired immediately.

12 (d) Certifications and records.--At the completion of
13 examinations and tests required by this section, the individual
14 who makes the examinations and tests shall certify by signature
15 and date that they have been conducted. A record shall be made
16 of any unsafe condition found and any corrective action taken.
17 Certifications and records shall be kept for at least one year
18 and shall be made available for inspection by authorized
19 representatives of the department and representatives of miners.

20 Section 345. (Reserved).

21 Section 346. (Reserved).

22 Section 347. (Reserved).

23 Section 348. (Reserved).

24 Section 349. (Reserved).

25 Section 350. Equipment approvals.

26 (a) Departmental discretion.--The department may require the
27 approval of all underground equipment, surface substations
28 feeding power underground, fans and personnel conveyances
29 (elevators, man hoists and escape capsules) connected to an
30 underground mine. All elevators at the time of installation

1 shall meet the criteria established in the current American
2 Society of Mechanical Engineers A17.1 Code, pertaining to
3 special application elevators, mine elevators, connected to an
4 underground mine. The equipment shall be grouped as follows for
5 the purposes of approval:

6 (1) Bituminous face equipment (BFE) - permissible
7 equipment.

8 (2) Bituminous open type equipment (BOTE) - non-
9 permissible equipment.

10 (3) Bituminous power distribution equipment (BPDE) -
11 nonpermissible power equipment.

12 (4) Surface installations:

13 (i) Mine power substations (MM-S).

14 (ii) Fans I (MM-F).

15 (iii) Personnel conveyances (MM-P).

16 (5) Minewide monitoring systems (MWMS).

17 (b) Limitation of approvals.--The approvals under subsection
18 (a) are specifically limited by the provision that permissible
19 equipment approved by the MSHA Approval and Certification Center
20 that is not in conflict with and which meets the requirements of
21 this act shall be deemed to be approved by the department.

22 (c) Procedures for approval.--The procedures for approval of
23 underground and surface equipment are as follows:

24 (1) Approvals shall be limited to electrical systems,
25 safety systems required by this act and specifications
26 developed by the task force established by the parties and
27 provided for under subsection (d).

28 (2) Newly purchased permissible equipment shall be
29 constructed in a fashion as to provide accessibility for
30 inspection of permissible components.

1 (3) The evaluation to determine whether the equipment
2 should be approved shall be based strictly on the specific
3 criteria set forth in this act and the performance
4 specifications under subsection (d). In the absence of
5 performance specifications for equipment or specific
6 provisions of this act addressing such equipment; and if the
7 department considers that the equipment as designed or built
8 poses an unacceptable risk to the health or safety of miners,
9 the following procedure shall be applied:

10 (i) The department, in a written report, shall
11 specify the unacceptable risk, based upon objective
12 ascertainable data and criteria approved by a nationally
13 recognized standards organization.

14 (ii) The department shall convene a task force to
15 develop specifications for the equipment in an expedited
16 fashion.

17 (iii) If the task force is unable to develop
18 applicable performance standards within 75 days, the
19 department may continue to withhold approval based upon
20 noncompliance with a mandatory safety standard of a
21 nationally recognized standards organization that has
22 been shown to be appropriate for mining.

23 (4) For new equipment, the prototype of which has not
24 been previously approved, a manufacturer or operator shall
25 submit to the department an application requesting approval.
26 The request for approval shall include four schematics, a
27 description and any other pertinent information for the
28 equipment.

29 (5) The application under paragraph (4) shall be
30 reviewed within 15 working days after receipt. Within the 15-

1 day period the department shall communicate verbally and in
2 writing to the applicant all discrepancies between the
3 application and the equipment performance specifications. If
4 the department does not communicate to the applicant within
5 the 15 days as described in this paragraph, the application
6 shall be deemed approved. If the applicant submits additional
7 schematics or information, the department shall have an
8 additional 15 days to communicate to the applicant concerning
9 such additional schematics or information.

10 (6) When the application review under paragraph (5) is
11 complete, an inspector shall be assigned to evaluate the
12 equipment and the operator or manufacturer notified of that
13 assignment. The equipment inspection shall be scheduled
14 within 20 working days of the departmental inspector being
15 notified. If the inspector gets to the inspection site and
16 the equipment is not in conformance with the specific
17 criteria set forth in this act and the performance
18 specifications described in this section, the time frame
19 shall stop. When the equipment has been modified to conform
20 with the specific criteria set forth in this act and the
21 performance specifications, the operator shall notify the
22 department for a reinspection, and the department shall
23 schedule the reinspection within ten working days. If the
24 equipment is in conformance with the specific criteria set
25 out in this act and the performance specifications described
26 in this section, but the schematics are not, the equipment
27 can be used, but the operator or manufacturer shall have ten
28 working days to resubmit the corrected schematics or the
29 equipment shall be taken out of service.

30 (7) For previously approved equipment that an operator

1 proposes to modify, the approval procedure established for
2 new equipment that has not been previously approved is to be
3 applicable. The approval process shall address only the
4 modification that has been made and shall not require changes
5 to the components of the equipment that were initially
6 approved. For the purpose of this paragraph, modification
7 shall not include changes to equipment in which components
8 are changed and replaced with components that provide
9 equivalent protection. Modifications subject to approval
10 shall include only those changes to equipment which affect
11 whether the equipment still satisfies the applicable
12 performance specifications described in this section or set
13 out specifically in this act.

14 (8) Approved equipment and repaired equipment that has
15 not been modified are outside the scope of the approval
16 process and shall be handled under the mine inspection
17 program of the department.

18 (9) Any direction to take corrective action shall be in
19 writing and shall specify the provisions of this act or the
20 performance specifications upon which the department relies.

21 (10) The department has the right to inspect equipment
22 to determine that it is in compliance with applicable
23 requirements of this act and the equipment performance
24 specifications. The inspections shall be performed in the
25 normal course of inspecting the mine and shall, to the extent
26 feasible, minimize the disruption of production.

27 (11) New or rebuilt equipment that has been approved,
28 but has not been inspected by an approval inspector, shall be
29 inspected by a mine electrical inspector. The operator shall
30 give reasonable notice to the mine electrical inspector for

1 an inspection prior to the equipment entering the mine. The
2 inspection shall be performed in the normal course of
3 inspecting the mine and shall, to the extent feasible,
4 minimize the disruption of production.

5 (d) Written criteria for equipment performance
6 specifications.--A task force shall be established to develop
7 written criteria for equipment performance specifications.

8 (1) The task force shall be comprised of equal numbers
9 of representatives, not less than two nor more than four,
10 selected by the department and the major trade association
11 representing coal operators in this Commonwealth. Final
12 consensus on performance specifications shall be determined
13 by a majority of the task force.

14 (2) The task force shall develop performance
15 specifications for approval of equipment and reserves the
16 right, for just cause, to add or delete from the developed
17 equipment performance specifications.

18 (3) All equipment performance specifications approved
19 pursuant to the stipulation of settlement shall remain in
20 effect unless and until they are modified, suspended or
21 revoked by this act, regulations promulgated under this act
22 or the equipment performance specifications task force.

23 (e) Definitions.--As used in this section, the following
24 words and phrases shall have the meanings given to them in this
25 subsection:

26 "Permissible equipment." As applied to electric face
27 equipment, all electrically operated equipment taken into or
28 used in or by the last open crosscut of an entry or a room of
29 any coal mine the electrical parts of which equipment,
30 including, but not limited to, associated electrical equipment,

1 components and accessories, are designed, constructed and
2 installed in accordance with the specifications of MSHA to
3 assure that the equipment will not cause a mine explosion or
4 mine fire, and the other features of which are designed and
5 constructed, in accordance with the specifications of the
6 Department of Environmental Protection, to prevent, to the
7 greatest extent possible, other accidents in the use of the
8 equipment.

9 CHAPTER 4

10 DIESEL-POWERED EQUIPMENT

11 Section 401. Underground use.

12 (a) General rule.--Underground use of inby and outby diesel-
13 powered equipment, including mobile equipment, stationary
14 equipment and equipment of all horsepower ratings, shall only be
15 approved, operated and maintained as provided under this
16 chapter, except for emergency fire-fighting equipment to be used
17 specifically for that purpose.

18 (b) Required attendant.--All diesel-powered equipment shall
19 be attended while in operation with the engine running in
20 underground mines. For purposes of this subsection, "attended"
21 shall mean an equipment operator is within sight or sound of the
22 diesel-powered equipment.

23 (c) Required certifications or approvals.--Inby and outby
24 diesel-powered equipment may be used in underground mines if the
25 inby or outby diesel-powered equipment uses an engine approved
26 or certified by MSHA, as applicable, for inby or outby use that,
27 when tested at the maximum fuel-air ratio, does not require a
28 MSHA Part 7 approval plate ventilation rate exceeding 75 c.f.m.
29 per rated horsepower. If MSHA promulgates new regulations that
30 change the MSHA Part 7 approval plate ventilation rate, the

1 c.f.m. requirement per rated horsepower shall be revised either
2 up or down on a direct ratio basis upon recommendation of the
3 technical advisory committee in accordance with section 424.
4 Section 402. Diesel-powered equipment package.

5 (a) Approval.--All diesel-powered equipment shall be
6 approved by the department as a complete diesel-powered
7 equipment package which shall be subject to all of the
8 requirements, standards and procedures set forth under this
9 chapter.

10 (b) Diesel engine approval.--Diesel engines shall be
11 certified or approved, as applicable, by MSHA and maintained in
12 accordance with MSHA certification or approval and approval by
13 the department.

14 Section 403. Exhaust emissions control.

15 (a) Exhaust emissions control systems.--

16 (1) Except as provided in paragraph (3), underground
17 diesel-powered equipment shall include an exhaust emissions
18 control and conditioning system that has been laboratory
19 tested with the diesel engine using the ISO 8178-1 test and
20 has resulted in diesel particulate matter emissions that do
21 not exceed an average concentration of 0.12 mg/m³ when
22 diluted by 100% of the MSHA Part 7 approval plate ventilation
23 rate for that diesel engine. If MSHA promulgates new
24 regulations that change the MSHA Part 7 approval plate
25 ventilation rate, the dilution percentage relative to the
26 approval plate ventilation rate shall be adjusted either up
27 or down on a direct ratio basis upon recommendation of the
28 technical advisory committee in accordance with section 424.

29 (2) Except as provided in paragraph (3), the exhaust
30 emissions control and conditioning system shall be required

1 to successfully complete a single series of laboratory tests
2 for each diesel engine, conducted at a laboratory accepted by
3 the department.

4 (3) An exhaust emissions control and conditioning system
5 may be approved for multiple diesel engine applications
6 through a single series of laboratory tests, known as the ISO
7 8178-1 test, only if data is provided to the technical
8 advisory committee that reliably verifies that the exhaust
9 emissions control and conditioning system meets, for each
10 diesel engine, the in-laboratory diesel particulate matter
11 standard established by this subsection. Data provided to
12 satisfy this paragraph shall include diesel particulate
13 matter production rates for the specified engine as measured
14 during the ISO 8178-1 test, if available. If ISO 8178-1 test
15 data for diesel particulate matter production is not
16 available for a specified engine, comparable data may be
17 provided to the technical advisory committee that reliably
18 verifies that the exhaust emissions control and conditioning
19 system shall meet, for the specified diesel engine, the in-
20 laboratory diesel particulate matter standard established by
21 this subsection. This standard shall only be used for in-
22 laboratory testing for approval of diesel-powered equipment
23 for use underground.

24 (b) Components of exhaust emissions system.--The exhaust
25 emissions control and conditioning system shall include the
26 following:

27 (1) A diesel particulate matter (DPM) filter that has
28 proven capable of a reduction in total diesel particulate
29 matter to a level that does not exceed the requirements of
30 subsection (a)(1). However, the technical advisory committee

1 may evaluate, in accordance with section 424, alternative
2 technologies that have the ability to meet the 0.12 mg/m³
3 standard.

4 (2) An oxidation catalyst or other gaseous emissions
5 control device capable of reducing undiluted carbon monoxide
6 emissions to 100 parts per million or less under all
7 conditions of operation at normal engine operating
8 temperature range.

9 (3) An engine surface temperature control capable of
10 maintaining significant external surface temperatures below
11 302 degrees Fahrenheit.

12 (4) A system capable of reducing the exhaust gas
13 temperature below 302 degrees Fahrenheit.

14 (5) An automatic engine shutdown system that shuts off
15 the engine before the exhaust gas temperature reaches 302
16 degrees Fahrenheit and, if water-jacketed components are
17 used, before the engine coolant temperature reaches 212
18 degrees Fahrenheit. A warning shall be provided to alert the
19 equipment operator prior to engine shutdown.

20 (6) A spark arrestor system.

21 (7) A flame arrestor system.

22 (8) A sampling port for measurement of undiluted and
23 untreated exhaust gases as they leave the engine.

24 (9) A sampling port for measurement of treated undiluted
25 exhaust gases before they enter the mine atmosphere.

26 (10) For permissible diesel equipment, any additional
27 MSHA regulations must be met.

28 (c) Diagnostics systems.--Onboard engine performance and
29 maintenance diagnostics systems shall be capable of continuously
30 monitoring and giving readouts for paragraphs (1), (2), (3),

1 (4), (5), (6), (7) and (8). The diagnostics system shall
2 identify levels that exceed the engine or component
3 manufacturer's recommendation or the applicable MSHA or bureau
4 requirements as to the following:

- 5 (1) Engine speed.
- 6 (2) Operating hour meter.
- 7 (3) Total intake restriction.
- 8 (4) Total exhaust back pressure.
- 9 (5) Cooled exhaust gas temperature.
- 10 (6) Coolant temperature.
- 11 (7) Engine oil pressure.
- 12 (8) Engine oil temperature.

13 Section 404. Ventilation.

14 (a) Minimum quantities.--Minimum quantities of ventilating
15 air where diesel-powered equipment is operated shall be
16 maintained pursuant to this section.

17 (b) Approvals.--Each specific model of diesel-powered
18 equipment shall be approved by the department before it is taken
19 underground. The department shall require that an approval plate
20 be attached to each piece of the diesel-powered equipment. The
21 approval plate shall specify the minimum ventilating air
22 quantity for the specific piece of diesel-powered equipment. The
23 minimum ventilating air quantity shall be determined by the
24 bureau based on the amount of air necessary at all times to
25 maintain the exhaust emissions at levels not exceeding the
26 exposure limits established under section 419.

27 (c) Minimum air quantities.--The minimum quantities of air
28 in any split where any individual unit of diesel-powered
29 equipment is being operated shall be at least that specified on
30 the approval plate for that equipment. Air quantity measurements

1 to determine compliance with this requirement shall be made at
2 the individual unit of diesel-powered equipment.

3 (d) Multiple units in operation.--Where multiple units are
4 operated, the minimum quantity shall be at least the total of
5 100% of MSHA's Part 7 approval plate ventilation rate for each
6 unit operating in that split. Air quantity measurements to
7 determine compliance with this requirement shall be made at the
8 most downwind unit of diesel-powered equipment that is being
9 operated in that air split. If MSHA promulgates new regulations
10 that change the MSHA Part 7 approval plate ventilation rate, the
11 minimum quantity where multiple units are operated shall be
12 revised on a direct ratio basis upon recommendation of the
13 technical advisory committee in accordance with section 424.

14 (e) Minimum quantities of air in certain splits.--The
15 minimum quantities of air in any split where any diesel-powered
16 equipment is operated shall be in accordance with the minimum
17 air quantities required in subsections (a), (b) and (c) and
18 shall be specified in the mine diesel ventilation plan.

19 Section 405. Fuel storage facilities.

20 (a) General rule.--An underground diesel fuel storage
21 facility shall be any facility designed and constructed to
22 provide for the storage of any mobile diesel fuel transportation
23 units or the dispensing of diesel fuel.

24 (b) Diesel fuel standards.--Diesel-powered equipment shall
25 be used underground only with fuel that meets the standards of
26 the most recently approved United States Environmental
27 Protection Agency (EPA) guidelines for over-the-road fuel.
28 Additionally, the fuel shall also meet the ASTM D975 standards
29 with a flash point of 100 degrees Fahrenheit or greater at
30 standard temperature and pressure. The operator shall maintain a

1 copy of the most recent delivery receipt from the supplier to
2 verify that the fuel used underground meets this standard.

3 (c) Requirements.--Underground diesel fuel storage
4 facilities shall meet the following general requirements:

5 (1) Fixed underground diesel fuel storage tanks are
6 prohibited.

7 (2) No more than 500 gallons of diesel fuel shall be
8 stored in each underground diesel fuel storage facility.

9 (d) Location.--Underground diesel fuel storage facilities
10 shall be located as follows:

11 (1) at least 100 feet from shafts, slopes, shops and
12 explosives magazines;

13 (2) at least 25 feet from trolley wires, haulage ways,
14 power cables and electric equipment not necessary for the
15 operation of the storage facilities; and

16 (3) in an area that is as dry as practicable.

17 (e) Construction requirements.--

18 (1) Underground diesel fuel storage facilities shall
19 meet the construction requirements and safety precautions
20 under this subsection.

21 (2) Underground diesel fuel storage facilities shall
22 meet all of the following:

23 (i) Be constructed of noncombustible materials and
24 provided with either self-closing or automatic closing
25 doors.

26 (ii) Be ventilated directly into the return air
27 course using noncombustible materials.

28 (iii) Be equipped with an automatic fire suppression
29 system complying with section 408. The technical advisory
30 committee may recommend for approval an alternate method

1 of complying with this section on a mine-by-mine basis in
2 accordance with section 424.

3 (iv) Be equipped with at least two portable 20-pound
4 multipurpose dry-chemical type fire extinguishers.

5 (v) Be marked with conspicuous signs designating
6 combustible liquid storage.

7 (vi) Be included in the preshift examination.

8 (3) Welding or cutting other than that performed in
9 accordance with paragraph (4) shall not be done within 50
10 feet of a diesel fuel storage facility.

11 (4) When it is necessary to weld, cut or solder
12 pipelines, cylinders, tanks or containers that may have
13 contained diesel fuel, the following requirements shall
14 apply:

15 (i) Cutting or welding shall not be performed on or
16 within containers or tanks that have contained
17 combustible or flammable materials until the containers
18 or tanks have been thoroughly purged and cleaned or
19 rendered inert and a vent or opening is provided to allow
20 for sufficient release of any buildup pressure before
21 heat is applied.

22 (ii) Diesel fuel shall not be allowed to enter
23 pipelines or containers that have been welded, soldered,
24 brazed or cut until the metal has cooled to ambient
25 temperature.

26 Section 406. Transfer of diesel fuel.

27 (a) General rule.--Diesel fuel shall be transferred as
28 provided in this section.

29 (b) Pump transfers.--When diesel fuel is transferred by
30 means of a pump and a hose equipped with a nozzle containing a

1 self-closing valve, a powered pump may be used only if:

2 (1) the hose is equipped with a nozzle containing a
3 self-closing valve without a latch-open device; and

4 (2) the pump is equipped with an accessible emergency
5 shutoff switch.

6 (c) Compressed gas prohibition.--Diesel fuel shall not be
7 transferred using compressed gas.

8 (d) Status of diesel engine.--Diesel fuel shall not be
9 transferred to the fuel tank of diesel-powered equipment while
10 the equipment's engine is running.

11 (e) Dry-system design.--Diesel fuel piping systems shall be
12 designed and operated as dry systems.

13 (f) Standards for pipes, valves and fittings.--All piping,
14 valves and fittings shall meet the following requirements:

15 (1) Be capable of withstanding working pressures and
16 stresses.

17 (2) Be capable of withstanding four times the static
18 pressures.

19 (3) Be compatible with diesel fuel.

20 (4) Be maintained in a manner that prevents leakage.

21 (g) Manual shutoff valves.--Vertical pipelines shall have
22 manual shutoff valves installed at the surface filling point and
23 at the underground discharge point.

24 (h) Exposed fuel pipelines.--Unburied diesel fuel pipelines
25 shall not exceed 300 feet in length and shall have shutoff
26 valves located at each end of the unburied pipeline.

27 (i) Horizontal pipeline prohibition.--Horizontal pipelines
28 shall not be used to distribute fuel throughout a mine.

29 (j) Limitation on piping systems.--Diesel fuel piping
30 systems shall be used only to transport fuel from the surface

1 directly to a single underground diesel fuel transfer point.

2 (k) Restrictions related to boreholes.--When boreholes are
3 used, the diesel fuel piping system shall not be located in a
4 borehole with electric power cables.

5 (l) Inspections.--Diesel fuel pipelines located in any shaft
6 shall be included as part of the required examination of the
7 shaft.

8 (m) Location in entries.--Diesel fuel piping systems located
9 in entries shall not be located on the same side of the entry as
10 electric cables or power lines.

11 (n) Trolley-haulage limitations.--Diesel fuel pipelines
12 shall not be located in any trolley-haulage entry, except that
13 they may cross the entry perpendicular if buried or otherwise
14 protected from damage and sealed.

15 (o) Protection.--Diesel fuel piping systems shall be
16 protected to prevent physical damage.

17 Section 407. Containers.

18 (a) General rule.--Containers for the transport of diesel
19 fuel shall meet the requirements of this section.

20 (b) Limitations on containers.--Diesel fuel shall be
21 transported only in containers specifically designed for the
22 transport of diesel fuel.

23 (c) Limitations on vehicle transport.--No more than one
24 safety can, conspicuously marked, shall be transported on a
25 vehicle at any time.

26 (d) Standards for containers other than safety containers.--
27 Containers, other than safety cans, used to transport diesel
28 fuel shall be provided with the following:

29 (1) Devices for venting.

30 (2) Self-closing caps.

1 (3) Vent pipes at least as large as the fill or
2 withdrawal connection, whichever is larger, but not less than
3 one and one-fourth inch nominal inside diameter.

4 (4) Liquid-tight connections for all container openings
5 that are identified by conspicuous markings and closed when
6 not in use.

7 (5) Shutoff valves located within one inch of the tank
8 shell on each connection through which liquid can normally
9 flow.

10 (e) Tanks with manual gauging.--When tanks are provided with
11 openings for manual gauging, liquid-tight caps or covers shall
12 be provided and shall be kept closed when not open for gauging.

13 (f) Capacity of containers.--Containers used for the
14 transport of diesel fuel shall not exceed a capacity of 500
15 gallons.

16 (g) Certain containers as permanent fixtures.--Containers,
17 other than safety cans, used for the transport of diesel fuel
18 shall be permanently fixed to the transportation unit.

19 (h) Method of transportation.--Diesel fuel transportation
20 units shall be transported individually and not with any other
21 cars, except that two diesel fuel transportation units up to a
22 maximum of 500 gallons each may be transported together.

23 (i) Prohibition.--Diesel fuel shall not be transported on
24 conveyor belts.

25 (j) Fire extinguisher.--When transporting diesel fuel in
26 containers other than safety cans, a fire extinguisher shall be
27 provided on each end of the transportation unit. The fire
28 extinguishers shall be multipurpose type dry-chemical fire
29 extinguishers containing a nominal weight of 20 pounds.

30 (k) Fire suppression systems for diesel transportation

1 units.--Diesel fuel transportation units shall have a fire
2 suppression system that meets the requirements of section 408.

3 (l) Limitations where trolley wires are present.--In mines
4 where trolley wire is used, diesel fuel transportation units
5 shall be provided with insulating material to protect the units
6 from any energized trolley wire, and the distance between the
7 diesel fuel transportation unit and the trolley wire shall not
8 be less than 12 inches, or the trolley wire shall be de-
9 energized when diesel fuel transportation units are transported
10 through the area.

11 (m) Parking restrictions.--Unattended diesel fuel
12 transportation units shall be parked only in underground diesel
13 fuel storage facilities.

14 (n) Emergency fueling restrictions.--Safety cans shall be
15 used for emergency fueling only.

16 (o) Standards for safety cans.--Safety cans shall be clearly
17 marked, have a maximum capacity of five gallons, be constructed
18 of metal and be equipped with a nozzle and self-closing valves.
19 Section 408. Fire suppression for equipment and transportation.

20 (a) General rule.--Fire suppression systems for diesel-
21 powered equipment and fuel transportation units shall meet the
22 requirements of this section.

23 (b) Type system.--The system must be an automatic
24 multipurpose dry-powder type fire suppression system suitable
25 for the intended application and listed or approved by a
26 nationally recognized independent testing laboratory.
27 Installation requirements shall be as follows:

28 (1) The system shall be installed in accordance with the
29 manufacturer's specifications and the limitations of the
30 listing or approval.

1 (2) The system shall be installed in a protected
2 location or guarded to minimize physical damage from routine
3 operations.

4 (3) Suppressant agent distribution tubing or piping of
5 the system shall be secured and protected against damage,
6 including pinching, crimping, stretching, abrasion and
7 corrosion.

8 (4) Discharge nozzles of the system shall be positioned
9 and aimed for maximum fire suppression effectiveness in the
10 protected areas. Nozzles shall also be protected against the
11 entrance of foreign materials, such as mud, coal dust or rock
12 dust that could prevent proper discharge of suppressant
13 agent.

14 (c) Automatic fire detection and suppression.--The fire
15 suppression system shall provide automatic fire detection and
16 suppression for all of the following:

17 (1) The engine, transmission, hydraulic pumps and tanks,
18 fuel tanks, exposed brake units, air compressors and battery
19 areas, as applicable, on all diesel-powered equipment.

20 (2) Fuel containers and electric panels or controls used
21 during fuel transfer operations on fuel transportation units.

22 (d) Fault and fire alarm annunciators.--The fire suppression
23 system shall include a system fault and fire alarm annunciator
24 that can be seen and heard by the equipment operator.

25 (e) Automatic engine shutdown.--The fire suppression system
26 shall provide for automatic engine shutdown. Engine shutdown and
27 discharge of suppressant agent may be delayed for a maximum of
28 15 seconds after the fire alarm annunciator alerts the operator.

29 (f) Manual actuators.--At least two manual actuators shall
30 be provided, with at least one manual actuator at each end of

1 the equipment. If the equipment is provided with an operator's
2 compartment, one of the mechanical actuators shall be located in
3 the compartment within easy reach of the operator. For
4 stationary equipment, the two manual actuators shall be located
5 with at least one actuator on the stationary equipment and at
6 least one actuator a safe distance away from the equipment and
7 in intake air.

8 Section 409. Fire suppression for storage areas.

9 (a) General rule.--Fire suppression systems for diesel fuel
10 storage areas shall meet the requirements of this section.

11 (b) Type system.--The system shall be an automatic
12 multipurpose dry-powder type fire suppression system or other
13 system of equal capability, suitable for the intended
14 application and listed or approved by a nationally recognized
15 independent testing laboratory. The system shall meet the
16 following installation requirements:

17 (1) The system shall be installed in accordance with the
18 manufacturer's specifications and the limitations of the
19 listing or approval.

20 (2) The system shall be installed in a protected
21 location or guarded to minimize physical damage from routine
22 operations.

23 (3) Suppressant agent distribution tubing or piping of
24 the system shall be secured and protected against damage,
25 including pinching, crimping, stretching, abrasion and
26 corrosion.

27 (4) Discharge nozzles of the system shall be positioned
28 and aimed for maximum fire suppression effectiveness in the
29 protected areas. Nozzles shall also be protected against the
30 entrance of foreign materials, such as mud, coal dust and

1 rock dust that could prevent proper discharge of suppressant
2 agent.

3 (c) Automatic fire detection and suppression.--The fire
4 suppressant system shall provide automatic fire detection and
5 suppression for the fuel storage tanks, containers, safety cans,
6 pumps, electrical panels and control equipment in fuel storage
7 areas.

8 (d) Types of alarms.--Audible and visual alarms to warn of
9 fire or system faults shall be provided at the protected area
10 and at a surface location that is always staffed when
11 individuals are underground. A means shall also be provided for
12 warning all endangered individuals in the event of fire.

13 (e) Manual actuators.--Fire suppression systems shall
14 include two manual actuators with at least one located within
15 the fuel storage facility and at least one located a safe
16 distance away from the storage facility and in intake air.

17 (f) System operation.--The fire suppression system shall
18 remain operative in the event of electrical system failure.

19 (g) Monitoring of certain systems.--If electrically
20 operated, the detection and actuation circuits shall be
21 monitored and provided with status indicators showing power and
22 circuit continuity. If not electrically operated, a means shall
23 be provided to indicate the functional readiness status of the
24 system.

25 (h) Weekly visual inspection.--Fire suppression devices
26 shall be visually inspected at least once each week by an
27 individual qualified to make the inspection.

28 (i) Maintenance, testing and records.--Each fire suppression
29 device shall be tested and maintained. A record shall be
30 maintained of the inspection required by this subsection. The

1 record of the weekly inspections shall be maintained at an
2 appropriate location for each fire suppression device.

3 (j) (Reserved).

4 (k) Instructions.--All miners normally assigned to the
5 active workings of a mine shall be instructed about any hazards
6 inherent to the operation of all fire suppression devices
7 installed and, where appropriate, the safeguards available for
8 each device.

9 Section 410. Use of certain starting aids prohibited.

10 The use of volatile or chemical starting aids is prohibited.

11 Section 411. Fueling.

12 (a) Restrictions on fueling locations.--Fueling of diesel-
13 powered equipment shall not be conducted in the intake escape-
14 way unless the mine design and entry configuration make it
15 necessary. In those cases where fueling in the intake escape-way
16 is necessary, the mine operator shall submit a plan for approval
17 to the department, which shall be investigated by the technical
18 advisory committee in accordance with section 424, outlining the
19 special safety precautions that will be taken to insure the
20 protection of miners. The submitted plan shall specify a
21 location, such as the end of the tail piece track or adjacent to
22 the load out point, where fueling shall be conducted in the
23 intake escape-way and all other safety precautions that shall be
24 taken, which shall include an examination of the area for
25 spillage or fire by a qualified individual.

26 (b) Spill cleanup.--Diesel fuel and other combustible
27 materials shall be cleaned up and not be permitted to accumulate
28 anywhere in an underground mine or on diesel-powered or electric
29 equipment located in a mine.

30 (c) Trained individual on duty.--At least one individual

1 specially trained in the cleanup and disposal of diesel fuel
2 spills shall be on duty at the mine when diesel-powered
3 equipment or mobile fuel transportation equipment is being used
4 or when any fueling of diesel-powered equipment is being
5 conducted.

6 Section 412. Fire and safety training.

7 (a) Training of underground employees.--All underground
8 employees at the mine shall receive special instruction related
9 to fighting fires involving diesel fuel. This training may be
10 included in annual refresher training under MSHA regulations at
11 30 CFR Part 48 (relating to training and retraining of miners)
12 or included in the fire drills required under MSHA regulations
13 relating to program of instruction; location and use of fire
14 fighting equipment; location of escape-ways, exits and routes of
15 travel; evacuation procedures; and fire drills.

16 (b) Training of miners.--All miners shall be trained in
17 precautions for safe and healthful handling and disposal of
18 diesel-powered equipment filters. All used intake air filters,
19 exhaust diesel particulate matter filters and engine oil filters
20 shall be placed in their original containers or other suitable
21 enclosed containers and removed from the underground mine to the
22 surface. Arrangements shall be made for safe handling and
23 disposal of these filters within a timely manner after they have
24 reached the surface.

25 Section 413. Maintenance.

26 (a) General rule.--Diesel-powered equipment shall be
27 maintained in an approved and safe condition as described in
28 this chapter or removed from service. Failure of the mine
29 operator to comply with the maintenance requirements of this
30 subsection may result in revocation of the department's approval

1 of the complete diesel-powered equipment package, provided
2 appropriate notification has been given to the mine operator and
3 the procedures of this section have been followed. Upon
4 receiving the appropriate notification, the mine operator shall
5 have 30 days to submit a plan to achieve and maintain
6 compliance. The plan shall be evaluated by the department and,
7 upon approval, the mine operator shall implement the plan. The
8 department shall monitor the mine operator's compliance. If the
9 department then determines that the mine operator is unable or
10 unwilling to comply, the department shall revoke the mine
11 operator's approval.

12 (b) Acquisition and maintenance of approvals.--To acquire
13 and maintain approval of a complete diesel-powered equipment
14 package, the mine operator shall comply with the following
15 requirements:

16 (1) All service, maintenance and repairs of approved
17 complete diesel-powered equipment packages shall be performed
18 by mechanics who are trained and qualified in accordance with
19 section 422.

20 (2) Service and maintenance of approved complete diesel-
21 powered equipment packages shall be performed according to:

- 22 (i) the specified routine maintenance schedule;
23 (ii) onboard performance and maintenance diagnostics
24 readings;
25 (iii) emissions test results; and
26 (iv) component manufacturers' recommendations.

27 Section 414. Records.

28 (a) General rule.--A record shall be made of all emissions
29 tests, preoperational examinations and maintenance and repairs
30 of complete diesel-powered equipment packages. The records made

1 pursuant to this section shall meet the requirements of this
2 section.

3 (b) Written certification.--The individual performing the
4 emissions test, examination, maintenance or repair shall certify
5 by date, time, engine hour reading and signature that the
6 emissions test, examination, maintenance or repair was made.

7 (c) Results.--Records of emissions tests and examinations
8 shall include the specific results of such tests and
9 examinations.

10 (d) Content.--Records of maintenance and repairs shall
11 include the work that was performed, any fluids or oil added,
12 parts replaced or adjustments made and the results of any
13 subsequently required emissions testing.

14 (e) Preoperational examination record retention.--Records of
15 preoperational examinations shall be retained for the previous
16 100-hour maintenance cycle.

17 (f) Certain records to be countersigned.--Records of
18 emissions tests, 100-hour maintenance tests and repairs shall be
19 countersigned once each week by the certified mine electrician
20 or mine foreman.

21 (g) Other record retention.--Except as specified in
22 subsection (e), all records required by this section shall be
23 retained for at least one year at a surface location at the mine
24 and made available for inspection by the department and by
25 miners and their representatives.

26 Section 415. Duties of equipment operator.

27 (a) Preoperational examination.--Prior to use of a piece of
28 diesel-powered equipment during a shift, an equipment operator
29 shall conduct an examination as follows:

30 (1) Check the exhaust emissions control and conditioning

1 system components to determine that the components are in
2 place and not damaged or leaking.

3 (2) Assure that the equipment is clean and free of
4 accumulations of combustibles.

5 (3) Assure that the machine is loaded safely.

6 (4) Check for external physical damage.

7 (5) Check for loose or missing connections.

8 (6) Check engine oil level.

9 (7) Check transmission oil level.

10 (8) Check other fluid levels, if applicable.

11 (9) Check for hydraulic, coolant and oil leaks.

12 (10) Check fan, water pump and other belts.

13 (11) Check the fan for damage.

14 (12) Check guards.

15 (13) Check the fuel level.

16 (14) Check for fuel leaks.

17 (15) Comply with recordkeeping requirements pursuant to
18 section 414.

19 (b) Operational examination.--After the engine is started
20 and warmed up, the equipment operator shall conduct an
21 examination as follows:

22 (1) Check all onboard engine performance and maintenance
23 diagnostics system gauges for proper operation and in-range
24 readings. The equipment operator shall immediately shut down
25 the engine and notify the operator if the onboard readings
26 indicate any of the following:

27 (i) Intake restriction at full engine speed is
28 greater than the manufacturer's recommendation.

29 (ii) Exhaust restriction at full engine speed is
30 greater than the manufacturer's recommendation.

1 (iii) Coolant temperature is at or near 212 degrees
2 Fahrenheit.

3 (iv) Low engine oil pressure.

4 (v) High engine oil temperature.

5 (2) Check safety features, including, but not limited
6 to, the throttle, brakes, steering, lights and horn.

7 (3) Comply with recordkeeping requirements pursuant to
8 section 414.

9 Section 416. Schedule of maintenance.

10 At intervals not exceeding 100 hours of engine operation, a
11 qualified mechanic shall perform the following maintenance and
12 make all necessary adjustments or repairs or remove the
13 equipment from service:

14 (1) Wash or steam clean the equipment.

15 (2) Check for and remove any accumulations of coal, coal
16 dust or other combustible materials.

17 (3) Check the equipment for damaged or missing
18 components or other visible defects.

19 (4) Conduct electrical and safety component inspections.

20 (5) Replace engine oil and oil filter.

21 (6) Check the transmission oil level and add oil, if
22 necessary.

23 (7) Check hydraulic oil level and add oil, if necessary.

24 (8) Check the engine coolant level and add coolant, if
25 necessary.

26 (9) Check all other fluid levels and add fluid, if
27 necessary.

28 (10) Check for oil, coolant and other fluid leaks.

29 (11) Inspect the cooling fan, radiator and shroud.

30 Remove any obstructions and make necessary repairs.

1 (12) Check all belts. Tighten or replace, if necessary.

2 (13) Check the battery and service as necessary.

3 (14) Check the automatic fire suppression system.

4 (15) Check the portable fire extinguisher.

5 (16) Check the lights.

6 (17) Check the warning devices.

7 (18) With the engine operating, check and replace or
8 repair the following:

9 (i) Oil pressure.

10 (ii) Intake air restriction at full engine speed.

11 (iii) Exhaust gas restriction at full engine speed.

12 (iv) Exhaust flame arrestor.

13 (v) All gauges and controls.

14 (19) Conduct repeatable loaded engine-operating test in
15 accordance with section 418.

16 (20) If the equipment is approved with a nondisposable
17 diesel particulate filter, a smoke dot test of the filtered
18 exhaust must be performed at this time. The results of the
19 smoke dot test shall be recorded on the 100-hour emissions
20 form. If the interpreted smoke dot number is greater than
21 three, the technical advisory committee shall be notified and
22 shall investigate to determine if the filter is functioning
23 properly.

24 (21) Evaluate and interpret the results of all of the
25 above tests and examinations and make all necessary repairs
26 or remove the equipment from service.

27 (22) Comply with the recordkeeping requirements pursuant
28 to section 414.

29 Section 417. Emissions monitoring and control.

30 (a) General rule.--Emissions for diesel-powered equipment

1 shall be monitored and controlled as provided in this section.

2 (b) Determination of baseline emission values.--When any
3 diesel-powered equipment first enters service at a mine,
4 baseline emission values shall be determined by a qualified
5 mechanic. Unless the technical advisory committee in accordance
6 with section 424 recommends an alternate procedure, the
7 qualified mechanic shall:

8 (1) Verify that the seal on the engine fuel injector is
9 in place and that the proper fuel pump is on the equipment.

10 (2) Install a new clean intake air cleaner, measure and
11 record the intake restriction pressure.

12 (3) Check the level of engine oil.

13 (4) Change the engine lubrication oil if not fresh.

14 (5) Check the level of the transmission fluid.

15 (6) Measure and record the exhaust backpressure. If
16 exhaust gas back pressure is above that recommended by the
17 manufacturer, steps must be taken to bring the exhaust gas
18 back pressure within the manufacturer's recommended limit
19 prior to beginning the test described in this subsection.

20 (7) Test the brakes.

21 (8) Place the equipment into an intake entry.

22 (9) Set the brakes and chock the wheels.

23 (10) Install an exhaust gas analyzer into the untreated
24 exhaust gas port.

25 (11) Start the engine and allow it to warm up to
26 operating temperature.

27 (12) Put the engine into a loaded condition. For this
28 section, the loaded condition for the baseline emissions
29 testing shall be determined by the technical advisory
30 committee by determining CO2 values that are representative

1 of the MSHA lug curve readings for that engine model and
2 horsepower.

3 (13) Start the exhaust gas analyzer and allow the engine
4 to operate in the loaded condition for a sufficient length of
5 time not less than a 90-second duration to insure proper CO
6 readings. The qualified mechanic shall record both CO and CO2
7 readings. Note: Baseline CO values shall be determined by the
8 technical advisory committee based upon MSHA lug curve
9 readings for that engine model and horsepower. If the
10 baseline CO values are greater than the MSHA lug curve
11 values, the technical advisory committee shall investigate
12 and either recommend approval or disapproval or recommend
13 alternate methods of meeting the requirements of this
14 section.

15 (14) Comply with recordkeeping requirements pursuant to
16 section 414.

17 (15) An alternative to the testing provided in
18 paragraphs (1) through (14) may be developed by the technical
19 advisory committee in accordance with section 424.

20 (16) Emissions test procedures for this section shall be
21 submitted to the technical advisory committee in accordance
22 with section 424 prior to being implemented for each engine
23 and equipment type.

24 Section 418. Diagnostic testing.

25 (a) Tests.--At intervals not exceeding once every 100 hours
26 of engine operation, a qualified mechanic shall perform
27 equipment maintenance diagnostic testing of each piece of
28 diesel-powered equipment in the mine. The qualified mechanic
29 shall do all of the following:

30 (1) Verify the identification numbers on the equipment.

- 1 (2) Check the level of the engine lubricating oil.
- 2 (3) Check the level of the transmission fluid.
- 3 (4) Set the brakes and chock the wheels.
- 4 (5) Install the portable carbon monoxide sampling device
5 into the untreated exhaust port coupling provided in the
6 operator's cab.
- 7 (6) Start the engine and allow it to warm up to
8 operating temperature.
- 9 (7) Check the intake restriction and the exhaust back
10 pressure at high idle speed.
- 11 (8) If the intake restriction is more than the
12 manufacturer's maximum recommended intake restriction,
13 replace the intake filter with a clean one.
- 14 (9) If exhaust gas back pressure is above that
15 recommended by the manufacturer, take steps to bring the
16 exhaust gas back pressure within the manufacturer's
17 recommended limit prior to beginning the test described in
18 this section.
- 19 (10) Put the engine into a loaded condition. As used in
20 this paragraph, the term loaded condition shall mean a
21 condition in which the carbon dioxide values are
22 representative of the MSHA lug curve values for that engine
23 model and horsepower rating.
- 24 (11) Take the following steps:
 - 25 (i) Start the exhaust gas analyzer.
 - 26 (ii) Allow the engine to operate for a sufficient
27 time, not less than 90 seconds, to insure proper carbon
28 monoxide readings and record both carbon monoxide and
29 carbon dioxide readings.
- 30 (12) Install the exhaust gas analyzer into the treated

1 exhaust port and repeat steps set forth in paragraphs (10)
2 and (11).

3 (13) If the average carbon monoxide reading for
4 untreated exhaust gas is greater than twice the baseline
5 established under section 417(b) or if the average carbon
6 monoxide reading for treated exhaust gas is greater than 100
7 parts per million, the equipment has failed and shall be
8 serviced and retested before it is returned to regular
9 service.

10 (14) Comply with recordkeeping requirements under
11 section 414.

12 (b) Procedures.--Emissions test procedures for this section
13 must be submitted to the technical advisory committee under
14 section 424 prior to being implemented for each engine and
15 equipment type.

16 (c) Alternative procedure.--An alternative to the testing
17 provided in subsection (a) may be developed by the technical
18 advisory committee under section 424.

19 Section 419. Exhaust gas monitoring and control.

20 (a) Concentration.--In monitoring and controlling exhaust
21 gases, the ambient concentration of exhaust gases in the mine
22 atmosphere shall not exceed 35 parts per million for carbon
23 monoxide and three parts per million for nitrogen dioxide. The
24 concentration of these exhaust gases shall be measured at the
25 equipment operator's or equipment attendant's position and by
26 the last piece of diesel-powered equipment operating in the same
27 split of air. Measurements shall be made weekly or more often if
28 necessary by a qualified individual and shall be conducted under
29 the requirements of this section.

30 (b) Measurement.--Measurement of exhaust gases shall be made

1 with a sampling instrument no less precise than detector tubes.

2 (c) Changes.--If the concentration of a gas listed in
3 subsection (a) is at least 75% of its exposure limit, changes to
4 the use of the diesel equipment, the mine ventilation or the
5 mining process shall be made.

6 (d) Excessive exposure.--If the concentration of a gas
7 listed in subsection (a) exceeds the exposure limit, the diesel
8 equipment operating in that split shall be removed from service
9 immediately, and corrective action shall be taken. After
10 corrective action has been taken by the mine operator, the
11 diesel equipment may be returned to service in its regular
12 operating mode for emissions testing purposes only; and
13 emissions testing shall be conducted immediately to assure that
14 the concentration does not exceed 75% of the exposure limit.
15 Corrective action shall be taken until the concentration does
16 not exceed 75% of the exposure limit before the diesel equipment
17 can be returned to full operation.

18 (e) Compliance.--The mine operator shall comply with the
19 following requirements:

20 (1) Repair or adjustment of the fuel injection system
21 shall only be performed by qualified mechanics authorized by
22 the engine manufacturer.

23 (2) Complete testing of the emissions system in
24 accordance with section 418 shall be conducted:

25 (i) prior to any piece of diesel-powered equipment
26 being put into service; and

27 (ii) after any repair or adjustment to the fuel
28 delivery system, engine timing or exhaust emissions
29 control and conditioning system.

30 (3) Service and maintenance of the intake air filter,

1 exhaust particulate filter and the exhaust system shall be
2 performed at specific time intervals based on the component
3 manufacturer's recommendation and compliance with the engine
4 or emissions control operation specifications and, as needed,
5 based on the on-board diagnostics or emissions test results.
6 Accurate records shall be maintained of service and
7 maintenance under this paragraph.

8 Section 420. Training and general requirements.

9 (a) Approval.--Training course instructors and training
10 plans required by this section shall be approved by the
11 department. Operator training and qualification shall meet the
12 requirements of this section.

13 (b) Conduct.--

14 (1) Training shall be conducted in the basics of the
15 operation of a diesel engine, Federal and State regulations
16 governing their use, company rules for safe operation,
17 specific features of each piece of equipment and the ability
18 to recognize problems.

19 (2) Training shall be provided to each equipment
20 operator and the mine health and safety committee if one
21 exists. This training shall be designed to bring every
22 operator to a level of good understanding of diesel equipment
23 operation.

24 (3) Each operator shall be qualified by attending a
25 minimum eight-hour course, including classroom training on
26 diesel fundamentals and equipment-specific hands-on training
27 on the job. Training shall include instruction in the
28 following classroom subjects:

29 (i) Engine fundamentals. This subparagraph includes
30 an introduction to the function of a diesel engine and

1 recognition of major components and their functions.

2 (ii) Diesel regulations. This subparagraph includes
3 an introduction to Federal and State regulations
4 governing the use of diesel equipment.

5 (iii) Diesel emissions. This subparagraph includes
6 an introduction to diesel emissions and their adverse
7 health effects.

8 (iv) Factors which affect diesel emissions. This
9 subparagraph includes a detailed presentation of engine
10 faults and diesel fuel quality, their effect on emissions
11 and the preventive actions which can be taken to minimize
12 emissions levels.

13 (v) Emissions control devices. This subparagraph
14 includes a detailed presentation of the different
15 emissions control devices employed to reduce emissions
16 and details about actions the operator must take to keep
17 the devices in working order.

18 (vi) Diagnostic techniques. This subparagraph
19 includes a presentation of techniques which can be
20 employed by the operator to assure the equipment is in
21 safe operating condition and instruction about how to
22 recognize and diagnose certain engine faults which may
23 cause increases in emissions.

24 (vii) Preoperational inspection. This subparagraph
25 includes a presentation of the purpose, benefits and
26 requirements of the preoperational inspection.

27 (viii) Ventilation. This subparagraph includes an
28 introduction to special ventilation requirements for
29 areas where diesel-powered equipment will operate.

30 (ix) Fire suppression system. This subparagraph

1 includes an introduction to the fire suppression system
2 and its function and when and how to activate the fire
3 suppression manually.

4 (x) Operating rules. This subparagraph includes a
5 detailed presentation of the driving rules, safe driving
6 speeds, traffic control devices and equipment
7 limitations.

8 (xi) Emergency procedures. This subparagraph
9 includes discussion of:

10 (A) emergencies, such as fire, diesel fuel
11 spills, component failure, loss of ventilation air
12 and emergency escape procedures; and

13 (B) potential use of the diesel-powered vehicle
14 as an emergency escape vehicle in case of a mine
15 emergency.

16 (xii) Recordkeeping and reporting procedures. This
17 subparagraph includes a presentation on required
18 recordkeeping and reporting procedures for problems or
19 unsafe conditions, high emissions levels and
20 preoperational inspections made by the equipment
21 operator.

22 (c) Certificate.--Upon successful completion of both
23 training sessions, the operator shall be issued a certificate of
24 qualification which qualifies the operator to operate a specific
25 type of diesel-powered equipment. An operator may be qualified
26 to operate more than one type of equipment by completing
27 additional equipment-specific training covering differences
28 specific to each additional type of equipment.

29 (d) Refresher training.--Refresher training, separate from
30 that required by MSHA regulations at 30 CFR Pt. 48 (relating to

1 the training and retraining of miners), shall be required
2 annually.

3 (e) Annual certificate.--A new certificate of qualification
4 shall be issued annually after the equipment operator has
5 received the annual refresher training.

6 Section 421. Equipment-specific training.

7 (a) Approval.--Training course instructors and training
8 plans required by this section must be approved by the
9 department.

10 (b) Description.--

11 (1) Equipment-specific hands-on orientation training
12 shall be given in an area of the mine where the equipment
13 will be operated. This orientation shall be specific to the
14 type and make of the diesel machine and shall be presented in
15 small groups.

16 (2) The following subjects shall be included in the
17 training:

18 (i) Equipment layout. This subparagraph includes
19 familiarization with the layout of the equipment, the
20 operator's compartments and the controls.

21 (ii) Preoperation inspection. This subparagraph
22 includes familiarization with the preoperation inspection
23 procedure and review of specific details of the
24 inspection and location of the components to be
25 inspected.

26 (iii) Equipment limitations. This subparagraph
27 includes instruction relating to equipment performance,
28 speeds, capacities and blind areas.

29 (iv) Operating areas. This subparagraph includes
30 instruction relating to areas in which the equipment may

1 be operated.

2 (v) Operation. This subparagraph includes
3 familiarization with the controls, gauges and warning
4 devices and safe operating limits of all indicating
5 gauges.

6 (vi) Refueling procedure. This subparagraph includes
7 familiarization with fuel handling, permissible refueling
8 areas, spill prevention, cleanup and potential hazards
9 from diesel fuel.

10 (vii) Emergency devices. This subparagraph includes
11 instruction relating to the location and use of the fire
12 extinguisher and fire suppression devices.

13 (viii) Driving practice. This paragraph includes
14 supervised operation of the equipment.

15 Section 422. Diesel mechanic training.

16 (a) Approval.--Training course instructors and training
17 plans required by this section must be approved by the
18 department.

19 (b) General rule.--Diesel mechanic training and
20 qualification shall meet the requirements of this section.

21 (c) Skills.--Diesel mechanics shall be trained and qualified
22 to perform maintenance, repairs and testing of the features of
23 diesel equipment certified by MSHA and the department.

24 (d) Qualification.--To be qualified, a diesel mechanic shall
25 successfully complete a minimum of 16 hours of a training
26 program approved by the department regarding the general
27 function, operation, maintenance and testing of emissions
28 control and conditioning components. The diesel mechanic shall
29 be qualified to perform these tasks on the specific machines
30 used at the mine or mines where they are employed. Additional

1 engine-specific training shall be provided to diesel mechanics
2 in accordance with a plan approved by the department.

3 (e) Retraining.--Annual retraining programs for diesel
4 mechanics shall be required and shall be approved by the
5 department. Retraining shall include refresher training as well
6 as new procedure and new technology training as necessary.
7 Retraining shall be separate from refresher training pursuant to
8 MSHA regulations at 30 CFR Pt. 48 (relating to training and
9 retraining of miners) and electrical training required by MSHA.

10 (f) Programs.--The minimum diesel mechanic training programs
11 shall include training in the following minimum subject
12 requirements:

13 (1) Federal and State requirements regulating the use of
14 diesel equipment.

15 (2) Company policies and rules related to the use of
16 diesel equipment.

17 (3) Emissions control system design and component
18 technical training.

19 (4) Onboard engine performance and maintenance
20 diagnostics system design and component technical training.

21 (5) Service and maintenance procedures and requirements
22 for the emissions control systems.

23 (6) Emissions testing procedures and evaluation and
24 interpretation of test results.

25 (7) Troubleshooting procedures for the emissions control
26 systems.

27 (8) Fire protection systems test and maintenance.

28 (9) Fire and ignition sources and their control and
29 elimination.

30 (10) Fuel system maintenance and safe fueling

1 procedures.

2 (11) Intake air system design and components technical
3 training and maintenance procedures.

4 (12) Engine shutdown device tests and maintenance.

5 (13) Special instructions regarding components, such as
6 the fuel injection system, which may only be repaired and
7 adjusted by a qualified mechanic who has received special
8 training and is authorized to make the repairs or adjustments
9 by the component manufacturer.

10 (14) Instruction on recordkeeping requirements for
11 maintenance procedures and emissions testing.

12 (15) Other subjects determined by the department to be
13 necessary to address specific health and safety needs.

14 Section 423. Operation of diesel-powered equipment.

15 (a) General rule.--In addition to other requirements of this
16 chapter, diesel-powered equipment shall be operated pursuant to
17 the standards set forth in this section.

18 (b) Attended equipment.--Diesel-powered equipment shall be
19 attended while in operation with the engine running in
20 underground mines.

21 (c) Idling.--Unnecessary idling of diesel-powered equipment
22 is prohibited.

23 (d) Access.--Roadways where diesel-powered equipment is
24 operated shall be maintained as free as practicable from bottom
25 irregularities debris and wet or muddy conditions, which affect
26 control of the equipment.

27 (e) Speed.--Operating speeds shall be consistent with
28 conditions of roadways, grades, clearances, visibility and
29 traffic and type of equipment used.

30 (f) Control.--Equipment operators shall have full control of

1 the mobile equipment while it is in motion.

2 (g) Traffic rules.--Traffic rules, including speed, signals
3 and warning signs, shall be standardized at each mine and
4 posted.

5 (h) Maintenance.--

6 (1) Diesel-powered equipment shall be maintained in a
7 safe operating condition which does not threaten health of
8 human beings.

9 (2) Diesel-powered equipment not maintained in
10 accordance with paragraph (1) or not maintained in accordance
11 with the engine or emissions control operating specifications
12 shall be removed from service immediately and shall not be
13 returned to service until all necessary corrective actions
14 have been taken.

15 Section 424. Technical advisory committee.

16 (a) Establishment.--The Technical Advisory Committee on
17 Diesel-Powered Equipment is established.

18 (b) Membership.--The advisory committee shall consist of two
19 members, who shall be residents of this Commonwealth.

20 (1) The Governor shall appoint one member to represent
21 the viewpoint of the coal operators in this Commonwealth
22 within 30 days from receipt of a list containing one or more
23 nominees submitted by the major trade association
24 representing coal operators in this Commonwealth.

25 (2) The Governor shall appoint one member to represent
26 the viewpoint of the working miners in this Commonwealth
27 within 30 days from receipt of a list containing one or more
28 nominees submitted by the highest ranking official within the
29 major employee organization representing coal miners in this
30 Commonwealth.

1 (c) Terms.--Each member of the technical advisory committee
2 shall be appointed for a term of three years. If renominated and
3 reappointed, a member may serve an unlimited number of
4 successive three-year terms.

5 (d) Functions.--The technical advisory committee has the
6 following functions:

7 (1) Advising the department regarding implementation of
8 this chapter.

9 (2) Evaluating alternative technology or methods for
10 meeting the requirements for diesel-powered equipment as set
11 forth in this chapter.

12 (3) Providing technical assistance to operators
13 regarding diesel equipment technologies.

14 (4) Conducting investigations relating to implementation
15 of this chapter.

16 (5) Providing training regarding diesel equipment
17 emission controls and emission testing.

18 (e) Compensation.--Members of the technical advisory
19 committee shall be compensated at the appropriate per diem rate
20 based on the prevailing formula administered by the
21 Commonwealth, but not less than \$150 per day, plus all
22 reasonable expenses incurred while performing their official
23 duties. Compensation shall be adjusted annually by the
24 department to account for inflation based on the rate of
25 inflation identified by the Consumer Price Index for All Urban
26 Consumers, Bureau of Labor Statistics. The individual member may
27 waive his right to all or part of the compensation set forth in
28 this provision.

29 (f) Meetings.--The technical advisory committee shall meet
30 at least twice during each calendar year.

1 (g) Quorum.--Actions of the technical advisory committee
2 require the participation of both members.

3 (h) Support.--

4 (1) The department shall make clerical support and
5 assistance available to enable the technical advisory
6 committee to carry out its duties. Upon the request of both
7 members of the technical advisory committee, the department
8 may draft proposed conditions of use and reports or perform
9 investigations.

10 (2) The department shall purchase for the technical
11 advisory committee equipment for testing diesel engine
12 exhaust emissions and measuring diesel engine surface
13 temperatures and exhaust gas temperatures. Alternative
14 technology or methods recommended by the technical advisory
15 committee or approved by the secretary shall not reduce or
16 compromise the level of health and safety protection afforded
17 by this chapter.

18 (i) Alternative technologies.--

19 (1) Upon application of a coal miner, coal mine operator
20 or diesel-related technology manufacturer, or on its own
21 motion, the technical advisory committee shall consider
22 requests for the use of alternative diesel-related health and
23 safety technologies with general underground mining industry
24 application which are consistent with this chapter. The
25 following apply:

26 (i) Upon receipt of an application, the technical
27 advisory committee shall conduct an investigation, which
28 shall include consultation with a representative of the
29 major trade association representing coal operators in
30 this Commonwealth and with a representative of the major

1 employee organization representing coal miners in this
2 Commonwealth.

3 (ii) Approval of an application made under this
4 subsection shall make the alternative technology or
5 method available for use by a coal mine operator in this
6 Commonwealth but shall not be construed to require that a
7 coal mine operator use the approved alternative
8 technology or method.

9 (2) Upon application of a coal mine operator, the
10 technical advisory committee shall consider site-specific
11 requests for use of alternative diesel-related health and
12 safety technologies. The committee's recommendations on
13 applications submitted under this subsection shall be on a
14 mine-by-mine basis. Upon receipt of a site-specific
15 application, the technical advisory committee shall conduct
16 an investigation, which shall include consultation with the
17 mine operator and the authorized representatives of the
18 miners at the mine. Authorized representatives of the miners
19 shall include a mine health and safety committee elected by
20 miners at the mine and an individual employed by an employee
21 organization representing miners at the mine or an individual
22 authorized as the representative of miners of the mine in
23 accordance with MSHA regulations at 30 CFR Pt. 40 (relating
24 to representative of miners). If there is no authorized
25 representative of the miners, the technical advisory
26 committee shall consult with a reasonable number of miners at
27 the mine.

28 (3) Within 180 days of receipt of an application for use
29 of alternative technologies or methods, the technical
30 advisory committee shall complete its investigation and make

1 a recommendation to the secretary. The technical advisory
2 committee members shall only recommend approval of an
3 application if, at the conclusion of the investigation, the
4 committee members have made a determination that the use of
5 the alternative technology or method will not reduce or
6 compromise the level of health and safety protection afforded
7 by this chapter. The time period under this paragraph may be
8 extended with the consent of the applicant.

9 (4) The technical advisory committee shall forward to
10 the secretary three possible recommendations:

11 (i) A unanimous recommendation to approve the
12 application for use of alternative technologies or
13 methods. A recommendation under this subparagraph must be
14 made in writing and include the results of the
15 investigation and specific conditions of use for the
16 alternative technology or method.

17 (ii) A unanimous recommendation to reject the
18 application for use of alternative technologies or
19 methods. A recommendation under this subparagraph must be
20 made in writing and outline in detail the basis for the
21 rejection.

22 (iii) A divided recommendation in which one member
23 of the technical advisory committee recommends approval
24 of the application for use of alternative technologies or
25 methods and one member of the advisory committee
26 recommends rejection of the application for use of
27 alternative technologies or methods. For a recommendation
28 under this subparagraph, each member of the committee
29 must submit a detailed report to the secretary within 14
30 days of the committee's vote outlining the member's

1 position for or against the application.

2 (5) The secretary shall proceed as follows:

3 (i) Alternative technologies or methods may be
4 approved by the secretary if they do not reduce or
5 compromise the level of health and safety protection
6 afforded by this chapter.

7 (ii) If a recommendation under paragraph (4)(i) or
8 (ii) is forwarded to the secretary by the technical
9 advisory committee, the secretary shall have 30 days in
10 which to render a final decision adopting or rejecting
11 the advisory committee's recommendation and the
12 application.

13 (iii) The secretary may only approve or reject a
14 recommendation under paragraph (4)(i) or (ii) without
15 modification unless the modification is unanimously
16 approved by the technical advisory committee.

17 (iv) If a recommendation under paragraph (4)(iii) is
18 forwarded to the secretary, the secretary shall convene,
19 within 30 days, a meeting with the members of the
20 technical advisory committee to discuss the reasons for
21 the divided recommendation and to determine whether
22 additional information and further discussion might
23 result in a unanimous recommendation by the committee.

24 (v) The following apply:

25 (A) The secretary shall render a decision on the
26 application within 30 days from the date of the
27 meeting with the technical advisory committee or, if
28 no meeting is convened, within 60 days of forwarding
29 of the recommendation.

30 (B) Upon consent of the applicant, the time

1 period under clause (A) may be extended.

2 (C) Except as set forth in clause (B), if the
3 secretary does not comply with the time requirements
4 to render a decision under this subparagraph, the
5 technical advisory committee's recommendation shall
6 be deemed rejected.

7 (6) Action taken by the secretary under this subsection
8 is subject to 2 Pa.C.S. Ch. 7 Subch. A (relating to judicial
9 review of Commonwealth agency action) and the act of July 13,
10 1988 (P.L.530, No.94), known as the Environmental Hearing
11 Board Act.

12 (j) Shaft and slope construction.--The secretary shall
13 establish, based on recommendations made by the technical
14 advisory committee, conditions of use for the use of diesel-
15 powered equipment in shaft and slope construction operations at
16 coal mines. Conditions of use proposed by the technical advisory
17 committee shall be considered by the secretary and shall be
18 adopted or rejected by the secretary without modification,
19 except as approved by the technical advisory committee.

20 CHAPTER 5

21 ENFORCEMENT AND REMEDIES

22 Section 501. Enforcement orders and duty to comply.

23 (a) Authority.--

24 (1) The department may issue written orders to enforce
25 this act, to effectuate the purposes of this act and to
26 protect the health and safety of miners and individuals in
27 and about mines.

28 (2) An order issued under this act shall take effect
29 upon notice, unless the order specifies otherwise.

30 (3) An appeal to the Environmental Hearing Board shall

1 not act as a supersedeas.

2 (b) Compliance.--It is the duty of any ~~individual~~ PERSON to <—
3 whom an order applies to comply with that order.

4 Section 502. Restraining violations.

5 (a) Department.--In addition to any other remedies provided
6 by law, the department may seek an injunction to restrain any of
7 the following:

8 (1) Violation of this act, a regulation promulgated
9 under this act or any approval, standard, order or permit
10 issued under this act.

11 (2) Creation and maintenance of a threat to the health
12 and safety of miners and individuals in and about mines.

13 (b) Court.--

14 (1) In a proceeding under subsection (a), the court may
15 do any of the following:

16 (i) Issue an injunction if it finds reasonable cause
17 to believe that the respondent is engaging in conduct
18 which:

19 (A) violates this act; a regulation promulgated
20 under this act or any approval, standard or order
21 issued under this act; or

22 (B) poses a threat to the health and safety of
23 miners and individuals in and about mines.

24 (ii) Levy civil penalties against the respondent.

25 (2) The courts of common pleas and the Commonwealth
26 courts are granted jurisdiction to hear and decide
27 proceedings brought under subsection (a).

28 (c) Bond.--The department is not required to post bond in
29 connection with proceedings brought under this section.

30 Section 503. Administrative penalties.

1 (a) Declaration of threat.--The following actions by mine
2 officials are declared to pose an imminent and substantial
3 threat to the health and safety of miners:

4 (1) Assigning an employee without training or proper
5 certification.

6 (2) Requiring or condoning a violation of this act, a
7 regulation promulgated under this act or any approval,
8 standard or order issued under this act.

9 (3) Failing to perform a required examination.

10 (4) Failing to address promptly the dangers identified
11 through a mine examination or inspection by the department.

12 (5) Supplying inaccurate information to the department.

13 (6) Failing to notify the department as required by this
14 act.

15 (7) Failing to de-energize electrical power as required
16 by this act.

17 (8) Failing to evacuate the mine when required to do so
18 by a provision of this act.

19 (b) Penalty for mine officials and operator liability.--

20 (1) If the department finds that a mine official has
21 engaged in any of the actions under subsection (a), the
22 department may assess an administrative penalty of up to
23 \$2,500 against the mine official. In every instance in which
24 an administrative penalty is assessed against a mine
25 official, the department may assess an administrative penalty
26 of the same amount against the operator of the mine where the
27 violations occurred.

28 (2) If the department finds that the operator directed
29 or condoned an unsafe act or a violation of the act:

30 (i) the department may assess an administrative

1 penalty of not less than \$10,000 and not more than
2 \$200,000 against the operator; and

3 (ii) the individual that directed or condoned the
4 action shall be removed from any position of command and
5 control.

6 (c) Nonexclusive remedy.--Assessment of a penalty under this
7 section does not preclude the department from exercising any
8 other remedy available to it.

9 (d) Factors.--In determining the amount of a penalty, the
10 department shall consider the following:

11 (1) The degree to which the conduct was reckless or
12 intentional.

13 (2) Whether an individual was fatally or seriously
14 injured.

15 (3) The potential for the violation resulting in death
16 or serious injury to an individual.

17 (4) Whether the conduct is in violation of an
18 outstanding order.

19 (5) In the case of an operator, the economic benefit to
20 the operator from not complying with the applicable
21 requirements.

22 (e) Practice and procedure.--A penalty under this section is
23 subject to:

24 (1) 2 Pa.C.S. Chs. 5 Subch. A (relating to practice and
25 procedure of Commonwealth agencies) and 7 Subch. A (relating
26 to judicial review of Commonwealth agency action); and

27 (2) 25 Pa. Code Ch. 1021 (relating to practice and
28 procedures).

29 (3) The act of July 13, 1988 (P.L.530, No.94), known as
30 the Environmental Hearing Board Act.

1 Section 503.1. Process for assessing administrative penalties.

2 (a) Assessment process.--If the department assesses an
3 administrative penalty, it shall inform the operator and mine
4 official, as applicable, of the amount of the penalty. The
5 ~~individual~~ PERSON assessed with the penalty shall then have 30 <—
6 days to pay the penalty in full or, if the ~~individual~~ PERSON <—
7 wishes to contest the amount of the penalty, the ~~individual~~ <—
8 PERSON shall, within the 30-day period, file an appeal of the <—
9 department's assessment with the Environmental Hearing Board.
10 Failure to appeal within 30 days shall result in a waiver of all
11 legal rights to contest the amount of the penalty.

12 (b) Prepayment of administrative penalty.--If the operator
13 or mine official wishes to contest either the amount of the
14 penalty or the violation, the operator or mine official shall
15 forward an amount not greater than \$25,000 to the department for
16 placement in an escrow account with the State Treasurer or any
17 bank located in this Commonwealth, or post an appeal bond in the
18 amount of the proposed penalty provided that the bond shall be
19 executed by a surety licensed to do business in this
20 Commonwealth and is satisfactory to the department. If through
21 administrative or judicial review of the penalty, it is
22 determined that no violation occurred, or that the amount of the
23 penalty should be reduced, the department shall within 30 days
24 remit the appropriate amount to the operator or mine official,
25 with any interest accumulated by the escrow deposit. Failure to
26 forward the money or the appeal bond to the department within 30
27 days shall result in a waiver of all legal rights to contest the
28 violation or the amount of the penalty.

29 (c) Payment of penalty.--The amount assessed after
30 administrative hearing or waiver shall be payable to the

1 Commonwealth of Pennsylvania, Mine Safety Fund and shall be
2 collectible in any manner provided under law for the collection
3 of debts. If any ~~individual~~ PERSON liable to pay any penalty ←
4 neglects or refuses to pay it after demand, the amount together
5 with interest and any costs that may accrue, shall constitute a
6 judgment in favor of the Commonwealth upon the property of the
7 ~~individual~~ PERSON from the date it has been entered and docketed ←
8 or recorded by the prothonotary of the county where such
9 property is situated. The department may, at any time, transmit
10 to the prothonotaries of the respective counties certified
11 copies of the judgments, and it shall be the duty of each
12 prothonotary to enter and docket the judgments in the
13 prothonotary's office, and to index it as judgments are indexed,
14 without requiring the payment of costs as a condition precedent
15 to the entry of the judgment.

16 Section 504. Unlawful conduct.

17 It is unlawful for ~~an individual~~ A PERSON to do any of the ←
18 following:

19 (1) Violate this act, a regulation under this act or any
20 approval, standard or order under this act.

21 (2) Cause or assist another in a violation under
22 paragraph (1).

23 (3) Hinder or threaten an agent or employee of the
24 department in the course of performance of a duty under this
25 act, including entry and inspection.

26 (4) Do any of the following on mine property:

27 (i) Venture into areas with unsupported roof.

28 (ii) Fail to make required gas checks.

29 (iii) Work on energized equipment without de-
30 energizing, locking out and tagging that equipment.

1 (iv) Change approved equipment without obtaining the
2 department's approval.

3 (v) Circumvent a safety device.

4 (vi) Disable an alarm.

5 (vii) Possess or use alcohol, drugs or smoking
6 materials in an unlawful manner on mine property.

7 (viii) Assign an employee without training or proper
8 certification to perform the assigned work.

9 (ix) Require or condone a violation of this act, a
10 regulation under this act or any approval, standard or
11 order under this act.

12 (x) Require or condone performance of an unsafe act.

13 (xi) Fail to perform a required examination.

14 (xii) Fail to abate promptly the dangers identified
15 through a mine examination or inspection by the
16 department.

17 (xiii) Supply inaccurate information to the
18 department.

19 (xiv) Fail to:

20 (A) notify the department as required by this
21 act;

22 (B) de-energize electrical power as required by
23 this act; or

24 (C) evacuate the mine when required.

25 Section 505. Criminal penalties.

26 (a) Prohibition.--~~An individual~~ A PERSON commits a felony of <—
27 the second degree if all of the following apply:

28 (1) The ~~individual~~ PERSON: <—

29 (i) violates this act, a regulation under this act
30 or any approval, standard or order under this act;

1 (ii) submits false information to the department; or
2 (iii) fails to notify the department as required by
3 this act.

4 (2) The action or inaction under paragraph (1):

5 (i) either results in the death of or substantial
6 bodily injury to an individual; or

7 (ii) creates a condition that poses a substantial
8 likelihood of causing death or substantial bodily injury
9 to an individual.

10 Section 506. Inspections.

11 (a) Administrative.--An agent or employee of the department
12 may do any of the following:

13 (1) Inspect a mine, property, building, premises, place,
14 book or record.

15 (2) Secure physical evidence. This paragraph includes
16 photography and videography.

17 (3) Conduct tests. This paragraph includes taking
18 samples.

19 (b) Warrant.--It shall be sufficient probable cause for a
20 court of competent jurisdiction to issue a search warrant if the
21 department establishes all of the following:

22 (1) The action under subsection (a) is pursuant to the
23 department's general inspection of mines and investigations
24 at mines.

25 (2) The agent or employee:

26 (i) has reason to believe that there has been a
27 violation of this act, a regulation under this act or any
28 approval, standard or order under this act of the
29 department has occurred or may occur; or

30 (ii) has been refused access or been prevented from

1 taking action under subsection (a).

2 Section 507. Intervention.

3 ~~An individual~~ A PERSON having an interest, which is or may be ←
4 adversely affected, has the right without posting bond to
5 intervene in an action brought by the department or in an appeal
6 before the Environmental Hearing Board under this act.

7 Section 508. Limitation of action.

8 (a) Civil and administrative.--Notwithstanding 42 Pa.C.S.
9 Ch. 55 Subch. B (relating to civil actions and proceedings) or
10 any other statutory provision to the contrary:

11 (1) A civil action under this act shall be commenced
12 within three years from the date the cause of action arises.

13 (2) An administrative action under this act shall be
14 commenced within three years from the date of the violation.

15 (b) Criminal.--Notwithstanding 42 Pa.C.S. Ch. 55 Subch. C
16 (relating to criminal proceedings) or any other statutory
17 provision to the contrary, a criminal action under this act
18 shall be commenced within three years from the date the offense
19 is committed.

20 Section 509. Relation to permit.

21 The following apply if the department finds that an operator
22 has demonstrated a lack of intent or ability to comply with this
23 act, a regulation under this act or any approval, standard or
24 order under this act:

25 (1) The department may take any action it deems
26 appropriate regarding the operator's permits, including
27 denial of applications for new, renewed or amended permits
28 and suspension or revocation of existing permits.

29 (2) Before taking action under paragraph (1), the
30 department shall provide the operator with an opportunity to

1 demonstrate to the department the operator's intent and
2 ability to comply.

3 Section 510. Certification actions.

4 (a) Denial.--The department shall not issue a certification
5 if, after investigation and an opportunity for an informal
6 hearing, it finds that the applicant lacks the ability or intent
7 to comply with this act.

8 (b) Sanctions.--

9 (1) The department may modify, suspend or revoke a
10 certification under this act if it determines that the holder
11 has done any of the following:

12 (i) Failed to comply with this act; a regulation
13 under this act or any approval, standard or order under
14 this act.

15 (ii) Interfered with the safe and lawful operation
16 of any mine.

17 (iii) Engaged in unlawful conduct under this act.

18 (2) An appeal to the Environmental Hearing Board shall
19 be treated as a petition for a supersedeas.

20 (3) An action under this subsection shall be taken only
21 if the monetary penalty under section 503 is inadequate.

22 (4) This subsection is subject to 2 Pa.C.S. Chs. 5
23 Subch. A (relating to practice and procedure of Commonwealth
24 agencies) and 7 Subch. A (relating to judicial review of
25 Commonwealth agency action) and the act of July 13, 1988
26 (P.L.530, No.94), known as the Environmental Hearing Board
27 Act.

28 (c) Retesting.--A mine official whose certificate has been
29 revoked shall have the right after five years of work experience
30 in an underground bituminous coal mine, two years of which must

1 be in a working section, to be reexamined and upon receipt of a
2 satisfactory score on the examination, the mine official shall
3 be given another certificate of qualification.

4 (d) Other remedies.--This section is in addition to any
5 other remedy afforded the department under this act or any other
6 provision of law.

7 Section 511. Withdrawal of certification.

8 If a superintendent receives information that any mine
9 foreman, assistant mine foreman, mine examiner or mine
10 electrician neglects duties or is incapacitated, the
11 superintendent shall make a thorough investigation. If the
12 superintendent finds evidence to sustain neglect or incapacity,
13 the superintendent shall suspend the individual and inform the
14 department.

15 CHAPTER 6

16 EMERGENCY MEDICAL PERSONNEL

17 Section 601. Definitions.

18 The following words and phrases when used in this chapter
19 shall have the meanings given to them in this section unless the
20 context clearly indicates otherwise:

21 "Emergency medical technician." A coal mine employee who has
22 successfully completed the course on emergency first aid care
23 and transportation of the sick and injured recommended by the
24 American Academy of Orthopedic Surgeons or an equivalent
25 organization and who has been certified by the Department of
26 Health to provide emergency care.

27 "Emergency medical technician paramedic." An individual who
28 has been certified by the Department of Health to provide
29 emergency medical treatment.

30 Section 602. Emergency medical personnel.

1 Emergency medical personnel shall be employed at every mine
2 as follows:

3 (1) At least one emergency medical technician shall be
4 on duty at any time when miners at that mine are engaged in
5 the extraction, production or preparation of coal. Emergency
6 medical technicians shall be on duty at a mine in sufficient
7 numbers to assure that no miner shall work in a mine location
8 which cannot be reached in 30 minutes by an emergency medical
9 technician. Emergency medical technicians shall be employed
10 at their regular duties at locations convenient for quick
11 response to emergencies and shall have available to them at
12 all times necessary equipment in compliance with Federal
13 regulations.

14 (2) Telephone services or the equivalent facilities
15 shall be installed which shall provide two-way voice
16 communications between the emergency medical technician at
17 the mine and medical personnel outside or away from the mine
18 who provide emergency medical services on a regular basis.

19 (3) Operators shall make adequate provisions so that at
20 least one emergency medical technician paramedic, registered
21 nurse, physician or physician assistant is available to
22 provide care at a mine at any time that individuals are
23 engaged in extraction, production or preparation of coal.
24 Emergency medical personnel under this paragraph shall be on
25 call to reach the entrance of the mine within 30 minutes.

26 Section 603. Regulations for training and certification.

27 The Department of Health shall promulgate regulations to
28 train and certify emergency medical technicians and emergency
29 medical technician paramedics.

30 Section 604. First aid training of mine employees.

1 Each operator shall provide every new employee who has not
2 received first aid training required by the department within
3 the six months prior to the date of employment with the training
4 required by the department. The department shall consult with
5 the Department of Health, MSHA and representatives of miners and
6 representatives of operators in determining the training to be
7 required under this section. Each mine employee shall be
8 provided with five hours of refresher first aid training within
9 each 24-month period of employment. Each employee shall be paid
10 regular wages or overtime pay, if applicable, for all periods of
11 first aid training.

12 Section 605. Continuing training.

13 The department, after consultation with the Department of
14 Health regarding the content of instruction courses, shall
15 provide for necessary training on a continuing basis of
16 emergency medical technicians and emergency medical technician
17 paramedics in sufficient numbers to satisfy the requirements of
18 this chapter.

19 Section 606. Regulations.

20 The board, after consultation with the Department of Health,
21 shall promulgate regulations to implement the operational
22 provisions of this chapter.

23 Section 607. Certification.

24 The Department of Health shall promulgate regulations to
25 prescribe procedures necessary to certify emergency medical
26 technicians and emergency medical technician paramedics and
27 consult with the department as may be required under this
28 chapter.

29 Section 608. Liability.

30 (a) Physicians.--

1 (1) Except as set forth in paragraph (2), a physician
2 who in good faith gives instructions to a certified emergency
3 medical technician or emergency medical technician paramedic,
4 a registered nurse or physician assistant shall not be liable
5 for civil damages as a result of issuing the instructions.

6 (2) Paragraph (1) does not apply where the actions
7 constitute gross negligence, reckless misconduct or
8 intentional misconduct.

9 (b) Other medical personnel.--

10 (1) Except as set forth in paragraph (2), a certified
11 emergency medical technician, emergency medical technician
12 paramedic, registered nurse or physician assistant who in
13 good faith attempts to render emergency care to a sick or
14 injured individual in or about a mine shall not be liable for
15 civil damages as a result of any acts or omissions.

16 (2) Paragraph (1) does not apply where the actions
17 constitute gross negligence, reckless misconduct or
18 intentional misconduct.

19 Section 609. Equivalent training.

20 If the department determines that an operator is presently
21 providing emergency medical care for its employees which is
22 equivalent to or superior to the emergency medical care provided
23 for under this chapter, the department shall make a finding that
24 the operator is in compliance with this chapter.

25 CHAPTER 7

26 SAFETY ZONES AND ENTOMBED WORKMEN

27 Section 701. Establishment.

28 A safety zone is established beneath and adjacent to every
29 stream, river and natural or artificial body of water in this
30 Commonwealth that is sufficiently large to constitute a hazard

1 to mining in the opinion and discretion of the department. In
2 the case of a stream or river, the safety zone shall extend
3 horizontally 200 feet from the high-water mark of each bank. In
4 the case of any other body of water sufficiently large to, in
5 the department's discretion, constitute a hazard to mining, the
6 safety zone shall extend horizontally 200 feet from the known
7 perimeter. Each safety zone shall extend downward to the limit
8 of the workable beds.

9 Section 702. Written authorization.

10 (a) Requirement.--No mining or removal of minerals shall be
11 permitted within the safety zone unless authorization is
12 specifically granted in advance and in writing by the
13 department.

14 (b) Procedure.--Authorization shall only be granted upon
15 application of the operator. Application shall be accompanied by
16 four copies of a plan of the proposed mining operation. The plan
17 shall indicate the thickness of the unconsolidated strata, the
18 thickness of the rock strata and coal beds overlying the bed to
19 be mined, the thickness of the bed, the width of the mine
20 openings, the width of the pillars to be left and any other
21 special features that may be deemed necessary as affecting the
22 contemplated first mining.

23 (c) Examinations.--The department shall make periodic
24 examinations to determine the accuracy of plans, maps and
25 drawings submitted to it under the provisions of this section.

26 Section 703. Pillar recovery.

27 Pillar recovery may not be undertaken until the pillar plan
28 is approved by the department. Applications for pillar recovery
29 must be accompanied by four copies of a plan, which must include
30 such information as shall be determined by the department. The

1 approval or disapproval of the plan shall be based on the
2 factors of depth, the thickness of the bed, the percentage of
3 pillars proposed to be extracted and to be left, the effect on
4 pillars remaining in overlying beds and any other special
5 features deemed necessary by the department.

6 Section 704. Proof of rock cover.

7 (a) Requirement.--Proof of the existence of 35 feet of rock
8 cover must accompany any plan submitted under this chapter.

9 (b) Sufficiency.--Proof of rock cover is to be ascertained
10 by testing holes drilled on:

11 (1) intersecting lines forming rectangles or squares
12 where the cover thickness is less than 50 feet; and

13 (2) on spacing of not more than 35-foot centers.

14 Section 705. Verification.

15 Plans and proof of rock cover under this chapter must be
16 signed by a registered professional mining engineer representing
17 the operator and a registered professional mining engineer
18 representing the lessor or the owner.

19 Section 706. Approval or disapproval of plans.

20 (a) Approval.--If, after review, the department approves the
21 plan, it shall send copies of the approved plan to the
22 registered professional mining engineer representing the
23 operator and to the registered professional mining engineer
24 representing the lessor or the owner.

25 (b) Disapproval.--If, after review, the department
26 disapproves the plan, it shall send copies of the disapproval,
27 identifying its reasons for that action, to the registered
28 professional mining engineer representing the operator and a
29 registered professional mining engineer representing the lessor
30 or the owner.

1 Section 707. Notice.

2 After approval of the plan by the department, mining or
3 removal of minerals shall not begin within the safety zone until
4 the mine foreman has conspicuously posted a notice on the
5 outside of the mine and has orally notified each miner affected
6 that the miner is working within the safety zone.

7 Section 708. Entombed workmen.

8 If a workman is enclosed, entombed or buried in any coal mine
9 in this Commonwealth, the department, on its own initiative or
10 upon request of a relative of the workman or the department, may
11 petition a court of competent jurisdiction to order recovery of
12 the body and to make a decree that the workman is dead.

13 CHAPTER 31

14 MISCELLANEOUS PROVISIONS

15 Section 3101. Repeals.

16 (a) Absolute.--The following acts or parts of acts are
17 repealed absolutely:

18 (1) The act of June 30, 1947 (P.L.1177, No.490), known
19 as The Coal Mine Sealing Act of 1947.

20 (2) The act of July 17, 1961 (P.L.659, No.339), known as
21 the Pennsylvania Bituminous Coal Mine Act.

22 (b) Inconsistent.--The following acts and parts of acts are
23 repealed to the extent they apply to bituminous coal mines:

24 (1) The act of May 9, 1889 (P.L.154, No.171), entitled
25 "An act to provide for the recovery of the bodies of workmen
26 enclosed, buried or entombed in coal mines."

27 (2) The act of June 3, 1943 (P.L.848, No.357), entitled
28 "An act providing that every mine foreman, assistant mine
29 foreman and fire boss, under the Bituminous Mining Laws and
30 the Anthracite Mining Laws of the Commonwealth, represents

1 and is an officer of the Commonwealth in the mine in which
2 employed, for the suspension or cancellation of the
3 certificates of such officials as shall hold same, and for
4 the disqualification of such as are uncertificated by the
5 Secretary of Mines after or prior to hearing, for failure or
6 refusal to perform his respective duties; defining the
7 procedure in such hearing and the powers of the Secretary of
8 Mines, with respect thereto, and providing for a review of
9 his decisions by courts of common pleas and the Superior
10 Court; providing for re-examination by the examining board of
11 any person whose certificate has been cancelled, and for
12 reinstatement of such as are uncertificated; and prohibiting
13 the employment by any operator in such capacity of any mine
14 foreman, assistant mine foreman or fire boss not possessing
15 the requisite certificate or whose certificate is suspended
16 or who has been disqualified."

17 (3) The act of December 22, 1959 (P.L.1994, No.729),
18 entitled "An act prohibiting mining in certain areas without
19 prior approval by the Department of Mines and Mineral
20 Industries; establishing standards for the approval of plans
21 for mining in such areas; imposing powers and duties on the
22 mine foremen and the Department of Mines and Mineral
23 Industries; and providing penalties."

24 (4) The act of July 9, 1976 (P.L.931, No.178), referred
25 to as the Coal Mine Emergency Medical Personnel Law.
26 Section 3102. Effective date.

27 This act shall take effect in 180 days.