subpart D to be ventilated to return air courses, and for ventilation of seals, other air courses may be designated as return air courses by the operator only when the air in these air courses will not be used to ventilate working places or other locations, structures, installations or areas required to be ventilated with intake air.

Worked-out area. An area where mining has been completed, whether pillared or nonpillared, excluding developing entries, return air courses, and intake air courses.

§ 75.302 Main mine fans.
Each coal mine shall be ventilated by one or more main mine fans. Booster fans shall not be installed underground to assist main mine fans except in anthracite mines. In anthracite mines, booster fans installed in the main air current or a split of the main air current may be used provided their use is approved in the ventilation plan.

§ 75.310 Installation of main mine fans.
(a) Each main mine fan shall be—
(1) Installed on the surface in an incombustible housing;
(2) Connected to the mine opening with incombustible air ducts;
(3) Equipped with an automatic device that gives a signal at the mine when the fan either slows or stops. A responsible person designated by the operator shall always be at a surface location at the mine where the signal can be seen or heard while anyone is underground. This person shall be provided with two-way communication with the working sections and work stations where persons are routinely assigned to work for the majority of a shift;
(4) Equipped with a pressure recording device or system. Mines permitted to shut down main mine fans under §75.311 and which do not have a pressure recording device installed on main mine fans shall have until June 10, 1997 to install a pressure recording device or system on all main mine fans. If a device or system other than a circular pressure recorder is used to monitor main mine fan pressure, the monitoring device or system shall provide a continuous graph or continuous chart of the pressure as a function of time. At not more than 7-day intervals, a hard copy of the continuous graph or chart shall be generated or the record of the fan pressure shall be stored electronically. When records of fan pressure are stored electronically, the system used to store these records shall be secure and not susceptible to alteration and shall be capable of storing the required data. Records of the fan pressure shall be retained at a surface location at the mine for at least 1 year and be made available for inspection by authorized representatives of the Secretary and the representative of miners;
(5) Protected by one or more weak walls or explosion doors, or a combination of weak walls and explosion doors, located in direct line with possible explosive forces;
(6) Except as provided under paragraph (e) of this section, offset by at least 15 feet from the nearest side of the mine opening unless an alternative method of protecting the fan and its associated components is approved in the ventilation plan.

(b)(1) If an electric motor is used to drive a main mine fan, the motor shall operate from a power circuit independent of all mine power circuits.
(2) If an internal combustion engine is used to drive a main mine fan—
(i) The fuel supply shall be protected against fires and explosions;
(ii) The engine shall be installed in an incombustible housing and be equipped with a remote shut-down device;
(iii) The engine and the engine exhaust system shall be located out of direct line of the air current exhausting from the mine; and
(iv) The engine exhaust shall be vented to the atmosphere so that the exhaust gases do not contaminate the mine intake air current or any enclosure.
(c) If a main mine fan monitoring system is used under §75.312, the system shall—
(1) Record, as described in paragraph (a)(4) the mine ventilating pressure;
§ 75.311 Main mine fan operation.

(a) Main mine fans shall be continuously operated, except as otherwise approved in the ventilation plan, or when intentionally stopped for testing of automatic closing doors and automatic fan signal devices, maintenance or adjustment of the fan, or to perform maintenance or repair work underground that cannot otherwise be made while the fan is operating.

(b) Except as provided in paragraph (c) of this section, when a main mine fan is intentionally stopped and the ventilating quantity provided by the fan is not maintained by a back-up fan system—

(1) Only persons necessary to evaluate the effect of the fan stoppage or restart, or to perform maintenance or repair work that cannot otherwise be made while the fan is operating, shall be permitted underground;

(2) Mechanized equipment shall be shut off before stopping the fan; and

(3) Electric power circuits entering underground areas of the mine shall be deenergized.

(c) When a back-up fan system is used that does not provide the ventilating quantity provided by the main mine fan, persons may be permitted in the mine and electric power circuits may be energized as specified in the approved ventilation plan.

(d) If an unusual variance in the mine ventilation pressure is observed, or if an electrical or mechanical deficiency of a main mine fan is detected, the mine foreman or equivalent mine official, or in the absence of the mine foreman or equivalent mine official, a designated certified person acting for the mine foreman or equivalent mine official shall be notified immediately, and appropriate action or repairs shall be instituted promptly.

(e) While persons are underground, a responsible person designated by the operator shall always be at a surface location where two-way communication with the controlling room or responsibility center is possible.