

FEDERAL REGISTER: 46 FR 21769 (April 14, 1981)

AGENCY: Environmental Protection Agency (EPA).

40 CFR Part 60

Review of Standards of Performance for New Stationary Sources: Coal Preparation Plants [AD-FRL-1623-5]

ACTION: Review of standards.

SUMMARY: EPA has reviewed the standards of performance for coal preparation plants (41 FR 2232). The review is required under the Clean Air Act, as amended August 1977. The purpose of this notice is to announce EPA's intent not to undertake revision of the standards at this time.

DATES: Comments must be received on or before June 15, 1981.

ADDRESS: Comments . Send comments to the Central Docket Section, (A-130), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, Attention: Docket No. A-80-26.

Background Information Document . The document "A Review of Standards of Performance For New Stationary Sources -- Coal Preparation Plants" (EPA report number EPA-450/3-80-022) is available upon request from the U.S. EPA Library (MD-35), Research Triangle Park, N.C. 27711, telephone (919) 541-2777.

Docket . Docket No. A-80-26, containing supporting information used in reviewing the standards, is available for public inspection and copying between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Central Docket Section, West Tower Lobby, Gallery 1, Waterside Mall, 401 M Street, S.W., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr Stanley T. Cuffe (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711; telephone (919) 541-5595.

SUPPLEMENTARY INFORMATION:

BACKGROUND

As prescribed by Section 111, proposal of standards of performance for coal preparation plants was preceded by the Administrator's determination that these plants contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare and by his publication of this determination in the Federal Register.

Coal preparation plants were selected for the development of standards based primarily on the expectation of increased demand for coal and the beneficial impact which would result from the application of best technology for air pollution control. Coal preparation plants were recommended for consideration for standards in the "Report of the Committee on Public Works," U.S. Senate, September 17, 1970, and named as a major source of air pollution in 40-CFR Part 52, "Prevention of Significant Air Quality Deterioration," as proposed in the Federal Register, August 27, 1974, (39 FR 31000). The recent emphasis on coal as a long-term source of fossil fuel energy will lend additional impetus to the growth of the coal preparation industry.

On October 24, 1974 (39 FR 37922), under Section 111 of the Clean Air Act, as amended, the Administrator proposed standards of performance for the following affected facilities within the coal preparation industry: thermal dryers, pneumatic coal cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), screening (classifying) equipment, coal storage and coal transfer points, and coal loading facilities.

The regulation, promulgated on January 15, 1976, (41 FR 2232), covers sources handling more than 200 tons per day, and applies the following particulate concentration limits and opacities: thermal dryers, 0.070 g/dscm (0.031 gr/dscf) and less than 20 percent opacity; pneumatic coal cleaning equipment, 0.040 g/dscm [0.018 gr/dscf) and less than 10 percent opacity. The regulation also limits to less than 20 percent the opacities of emissions from coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems.

The Clean Air Act Amendments of 1977 require that the Administrator of EPA review and, if appropriate, revise established standards of performance for new stationary sources at least every 4 years [Section 111(b)(1)(B)]. This notice

announces that EPA has completed a review of the standards of performance for coal preparation plants and invites comment on the results of this review.

Under Executive Order 12291, EPA is required to judge whether a regulation is a "major rule" and therefore subject to certain requirements of the Order. The Agency has determined that this regulation would result in none of the adverse economic effects set forth in Section 1 of the Order as grounds for finding a regulation to be a "major rule". In fact, this action would impose no additional regulatory requirements because the Agency has decided not to undertake revision of the standards for coal preparation plants at this time. This decision is based upon the fact that there has been no change in the type and performance of control systems for this industry since promulgation of new source performance standards. {21770}

FINDINGS

INDUSTRY GROWTH RATE

In 1974, there were approximately 390 coal preparation plants operating in the United States. In 1979, there were about 490 such plants. By 1985, it is estimated that about 40 new or modified facilities will have been added.

In spite of the growth in the coal cleaning industry, the number of thermal dryers in the United States has declined from 184 in 1972 to 114 in 1977. Many new plants use centrifugal-type mechanical dryers which require no fuel and are therefore less expensive than thermal dryers. Seventeen thermal dryers (only about 36 percent of the number that EPA projected in 1974) have been constructed since the standards of performance became effective.

The use of air tables (pneumatic coal cleaning) was projected to decline in 1974, but the standard was set because they were still available from equipment vendors and could have been installed without particulate control in the absence of a performance standard. Although three such facilities have been constructed since the standards of performance became effective, there has been a net decline in total number of facilities within the same time period.

EMISSIONS AND CONTROL TECHNOLOGY

CURRENT PARTICULATE CONTROL TECHNOLOGY

The best available control technology for thermal dryers is still a centrifugal (cyclone) collector followed by a high efficiency venturi aqueous scrubber. The best control for pneumatic coal cleaning equipment is the centrifugal collector followed by fabric filtration. No improvements on these control techniques have been demonstrated.

Fugitive emissions from coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems, are controlled by wetting and by enclosing sources of potential fugitive particulate emissions.

SULFUR DIOXIDE EMISSIONS

The use of venturi scrubbers to collect particulate matter has the additional benefit of removing most of the sulfur dioxide. Limited source test data indicate sulfur dioxide emissions of less than 10 percent of theoretical. Sulfur dioxide emissions from the venturi scrubbers do not appear to be significant.

EMERGING CONTROL TECHNOLOGY

No promising new particulate control techniques have been demonstrated since promulgation of the standards of performance for coal preparation plants.

Standards of performance for coal cleaning do not apply to lignite and sub-bituminous coals prevalent in the West. These fuel seams are relatively low in gross impurities, and preparation has historically been limited to crushing sufficiently to allow handling.

Coals contain varying amounts of sulfur in the form of pyrites and chemically-bound sulfur. Coal cleaning removes some pyrites, but little or no chemical sulfur. The removal of chemical sulfur from coal is being investigated, but no practical process is yet demonstrated.

RESULTS ACHIEVABLE WITH DEMONSTRATED CONTROL TECHNOLOGY

Three pneumatic coal cleaning systems have been constructed and tested under the new source performance standards. All were in compliance, with particulate emissions ranging from 0.011 to 0.022 g/dscm (0.005 to 0.010 gr/dscf.)

The thermal dryers which have achieved compliance have had particulate emissions ranging from 0.016 to 0.070 g/dscm (0.007 to 0.031 gr/dscf).

There has been general compliance with the fugitive emission opacity limits from coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems.

CONCLUSIONS

Based upon this review of the standards of performance for coal cleaning, the following conclusions were reached:

1. Existing standards of performance for pneumatic coal cleaning and thermal drying systems are based on fabric filters and high-pressure-drop aqueous venturi scrubbers, respectively. Because there has been no change in the type and performance of control systems for these sources since promulgation, the existing standards are still appropriate.
2. Emission tests of thermal dryers fired by sulfur-containing coals show that only minor quantities of SO₂ escape the water scrubbers that were installed to control particulate emissions. Therefore, added regulations to limit SO₂ emissions are not necessary.
3. The existing standards of performance do not apply to coal unloading stations. EPA plans to investigate the need and the technology to regulate these sources of potential fugitive emissions.

Dated: April 8, 1981.

Walter C. Barber, Acting Administrator .

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