

Certainly the Oil Industry, as well as the consumer, should be permitted this relatively short time to meet regulatory standards, which are somewhat debatable.

We would therefore recommend that Section 9(c)2, of both H.R. 6981, by Gude, and H.R. 10017, by Horton, be amended to read as follows:

(2) No person shall use fuels the sulphur content of which exceeds the following percentages by weight: Effective Date. From effective date of law to June 30, 1968, maximum sulphur content, 2 per cent. July 1, 1968, maximum sulphur content, 1.5 per cent. July 1, 1969, maximum sulphur content, 1 per cent.

I thank you, gentlemen, for your patience. I would like to ask Mr. Via to make a few brief statements on stack emissions.

Mr. MULTER. We have three other witnesses whom we would like to hear, and time is running out.

Mr. COUNTS. This would take just a few minutes.

Mr. MULTER. I would appreciate it if you would be very brief.

Mr. VIA. Gentlemen, residual oil—properly burned—does not smoke. Smoke is the result of incomplete combustion and is principally caused by an insufficient amount of air mixing with the fuel being burned. Smoke can occur with the burning of all fuels.

“Perfect” combustion is that in which all of the combustible is burned while supplying only the exact amount of air to complete the reaction. In actual practice this condition is never attained and additional air—beyond the theoretical requirement is supplied to insure that combustion is complete. If this additional air is not supplied in sufficient volume—incomplete combustion and smoke results. This is not the fault of the fuel, rather it is the fault of the equipment burning the fuel.

In practice, good combustion requires three things: A. proper proportioning of fuel and air, B. thorough mixing of fuel and air, and, C. initial and sustained ignition of the mixture.

Residual oil can, and is being burned completely, efficiently and with practically zero smoke. This is accomplished when quality equipment is being used, properly installed, and properly adjusted to supply sufficient combustion air to burn all the fuel.

The time of greatest potential for smoke emission occurs on a cold start-up. That is, when the burner first fires into a cold combustion chamber and stack.

But even here, if the combustion cycle is so designed so that the start-up occurs on “low fire” and remains on “low fire” until the combustion chamber refractory is heated to a point where it assists in supporting combustion—and then the burner switches to a “high fire” condition—incomplete combustion and smoke can virtually be eliminated.

Once the combustion chamber is hot—repeated cycles of the burner occur with a crisp, clean ignition—and produces no smoke. The combustion equipment, of course, must be serviced and maintained at a high efficiency just as an automobile must be checked and serviced to keep it running well.

Last winter and spring, under the close supervision of a committee of Department of Health, Education, and Welfare—headed by Mr. Jack Copeland—a survey was taken by the Steuart Petroleum Company on some 20 installations of residual oil burning equipment