

Docket No. OAR-2002-0088 for additional information).

Comment: Two commenters stated that the proposed Refractory Products Manufacturing NESHAP does not account for the current economic status of the refractory products manufacturing industry. One of the commenters noted that approximately 40 percent of the domestic steel industry is in bankruptcy, and the steel industry accounts for about 60 percent of the domestic refractory products market. He also pointed out that three major refractory products manufacturing companies are in bankruptcy, more than 30 plants have permanently closed in recent years, and pressure from foreign competition in the refractory products market is increasing. The other commenter reiterated the statements of the first commenter regarding bankruptcies among major domestic refractory producers and the increase in foreign competition.

Response: During the early stages of regulatory development, we issued an information collection request (ICR) to the refractory products manufacturing industry. Our economic impact analysis (EIA) makes use of detailed facility-level data on production for the year 1997 obtained from the industry's responses to the ICR. This information, along with publically available data (*i.e.*, U.S. Census Bureau), was used at proposal to construct a model of the markets for refractory products that is consistent with market, facility, and company conditions in 1997. Because the ICR provided data only for 1997, we are limited in our ability to update the model completely to reflect conditions in later years. However, for the final rule we have, to the extent practicable, updated the economic model to reflect current market conditions, including: (1) The exclusion of refractory manufacturing facilities known to have closed since the base year of 1997; (2) the assumption that producers will absorb the full cost of the rule; with only six out of 147 producers affected by the rule and the financial stress on the industry, we assume producers will be unable to increase market prices to recover some of their increase in production costs; and (3) the incorporation of parameters from a recent update of an iron and steel model to inform the estimated demand for refractories (*i.e.*, the demand elasticity, or the sensitivity of demand from the steel market based on market conditions in the iron and steel industry). The iron and steel model was specifically revised to address current conditions in the steel industry.

We also acknowledged in the EIA at proposal that both steel and refractory manufacturing companies are currently under financial stress. In the EIA, we discussed several trends that have placed considerable pressure on refractory manufacturers, including reduced production by integrated domestic steelmakers, improved quality of refractories (thus requiring less frequent replacement), and increased imports of refractory products.

We note that the vast majority of facilities in the industry (both foreign and domestic producers) are unaffected by the rule. The regulatory costs of the rule are approximately \$2 million per year, which represents a small share of total industry production costs of approximately \$2,300 million per year. In the model for the final rule, prices are not predicted to change, and the quantities of refractories produced are projected to decrease by 3,792 tons. It is assumed that the loss in domestic production will be absorbed by foreign imports. Our analysis concludes these six facilities incurring regulatory costs will absorb the majority of the costs and burden of the rule, with one facility projected to close as a result of the rule. At the parent company level, the costs uniformly are less than 1 percent of baseline corporate sales. Overall, we have adjusted the economic model to address the issues raised by the commenters, and we believe that the final rule will have a limited impact on the refractory products manufacturing industry.

E. Definitions

Comment: Two commenters commented on how the term *refractory product* is defined in the proposed rule. Both commenters stated that, based on this definition, some graphite manufacturing sources could be confused with certain refractory products manufacturing sources that would be affected by the final rule. It is their understanding that we intend to develop a separate NESHAP for the graphite manufacturing industry, and graphite manufacturing sources, although similar to some refractory products manufacturing sources, would not be subject to the Refractory Products Manufacturing NESHAP. The commenters suggested adding the phrase, “. . . containing less than 50 percent carbon” to the definition of *refractory product*.

Response: We agree with the commenters that the definition of *refractory product* in the proposed rule could inadvertently affect certain graphite manufacturing sources. Consequently, we have written the

definition as requested by the commenters. In addition, we are including a definition for pitch-bonded refractory products in the final rule. We believe that definition will help to preclude graphite baking ovens, which are not subject to today's final rule, from being classified as pitch-bonded curing ovens, which are regulated under today's final rule.

Comment: One commenter commented on how the term *research and development process unit* is defined in the proposed rule. The commenter stated that the proposed definition is inconsistent with the definition of research and development facilities specified in section 112(c)(7) of the CAA, 40 CFR 63.41, and several other NESHAP published in 40 CFR part 63. The difference between those definitions and the proposed definition specified in the Refractory Products Manufacturing NESHAP is the exclusion of the phrase “in a de minimis manner” from the proposed rule.

Response: We agree with the commenter that the definition of *research and development process unit* in the Refractory Products Manufacturing NESHAP should be consistent with the definition of research facilities in the CAA and in other rules. We have written the definition of *research and development process unit* as suggested by the commenter.

V. Summary of Impacts

A. What Are the Health Impacts?

The HAP that will be controlled by today's final rule are associated with a variety of adverse health effects. These adverse health effects include chronic health disorders (*e.g.*, irritation of the lung, skin, and mucous membranes, gastrointestinal effects, and damage to the kidneys and liver) and acute health disorders (*e.g.*, respiratory irritation and central nervous system effects such as drowsiness, headache, and nausea). The EPA has classified two of the HAP (formaldehyde and POM) as probable human carcinogens.

The EPA does not have the type of current detailed data on each of the facilities and the people living around the facilities covered by today's final rule for this source category that would be necessary to conduct an analysis to determine the actual population exposures to the HAP emitted from these facilities and the potential for resultant health effects. Therefore, EPA does not know the extent to which the adverse health effects described above occur in the populations surrounding